JOB FUTURES

AN OCCUPATIONAL OUTLOOK FOR THE '90s

QUEBEC

JOB FUTURES - QUEBEC
AN OCCUPATIONAL OUTLOOK FOR THE 1990s
QUEBEC

VOLUME I:
FIELDS OF STUDY
2nd Edition

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PREFACE

Technological progress greatly affects both the way in which the duties and skills associated with various occupations are modified and the nature and volume of the labour demand. The acceleration of technological change over the past few years has made it more difficult for individuals to choose from among all the different career opportunities available to them. Moreover, these changes have brought to the fore the adaptation problems faced by a labour force with outdated skills and has given rise to more pressing concerns on the part of companies about human resources planning.

In order to respond to the growing need for information on the anticipated employment growth in the various occupations, the Strategic Planning Branch of EIC - Quebec is pleased to present the second edition of *Job Futures - Quebec*.

This publication comprises two volumes. The first presents statistics on school graduates and describes their situation on the labour market, particularly with respect to placement rate, type of job, salary, and medium- and long-term employment outlook.

Unlike the previous version, this edition covers all the vocational training sectors, namely the secondary and college vocational sectors and the three university levels. More than 130 fields of training from these three sectors are analyzed.

The second volume deals with the expected employment growth in the labour market by occupation for the 1990-2000 forecast period and in the labour supply for the same period. Volume II also gives a detailed account of the conditions for practising these occupations, the technological, technical and organizational changes affecting them, complementary training leading to their practice and the skills and aptitudes needed by graduates to compete effectively on the labour market.

It is my hope that you will find this publication a useful source of information that will assist you in your decision-making. Finally, any comments sent to us on the content or format of the document will be taken into account in the next edition.

J. Leblanc

Jacques Leblanc
Director
Strategic Planning Branch
Employment and Immigration Canada
Quebec Region

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INTRODUCTION

Job Futures - Quebec was designed to meet the needs of people who are seeking ways to enter the labour market and for those who are helping them do so. It is intended primarily for students, those who wish to re-enter the labour market after a long time away from it, those who are interested in redirecting their professional careers, educational and vocational counsellors as well as other people working in the fields of education and labour.

Volume 1

Knowledge of one's own aspirations, tastes and personal abilities is undoubtedly the most reliable criterion for choosing an academic and vocational path that will ensure the best chance of success. Nonetheless, in order to be perfectly balanced, this choice must also be consistent with actual job opportunities and work conditions. In this respect, graduates' recent experience on the labour market is no doubt one of the most important sources of information.

Do graduates in the field of study that interests me pursue more advanced studies after obtaining a first degree? Do they face difficulties entering the labour market? What are the facts on job placement and unemployment? Which occupations do they work in after graduation? To what extent do they work in jobs that are related to their education? What is their average salary? Is the employment outlook over the next few years expected to improve or deteriorate? These are all questions that are likely to interest students who are about to make a choice with respect to their education and career and to which the first volume of *Job Futures - Quebec* attempts to provide answers.

How Volume I is organized

The first volume presents the principal statistics concerning school graduates by placing the emphasis on the market's capacity to provide them with employment. A short-term view of the market situation is provided by the main results of graduate surveys conducted in 1988. The results given concern the respondents' situation on the labour market after graduation, placement rate, type of job and salary. As labour market conditions are constantly changing, medium- and longer-term outlooks have been introduced to describe the employment opportunities that are expected to prevail over the next decade.

The first volume is organized according to groups of disciplines that have been kept as homogeneous as possible while at the same time preserving the significance of the data. Thus, all the vocational training levels of the regular education system are covered by this edition of *Job Futures - Quebec*, namely, the secondary and college vocational sectors and the three university levels (bachelor's, master's and doctoral degrees). A total of 133 fields of training are analyzed, i.e. 32 for the secondary level, 39 for the college level, 43 for the bachelor's level and 19 for the master's and doctoral levels which have been combined to form the higher education sector. In order to facilitate use, the composition of these different fields of study as well as an index by specialty are appended.

How to use Volume I

This volume was designed as a companion to Volume 2 which gives a more detailed picture of the conditions in which the various occupations are practised, the technological, technical and organizational changes affecting them, complementary training leading to their practice and employment outlook. The reader interested in doing so can therefore consult a given field of training in Volume I, study the overall outlook for the field, identify one or more occupations associated with it and then consult Volume II for further information on these occupations. Conversely, the reader may first identify an occupation, trace its growth by consulting Volume II and then examine the employment outlook for graduates in the field of study associated with this occupation.

We also invite the reader to consult the section **CHOOSING THE TYPE OF TRAINING THAT MEETS MY NEEDS**, which draws a general picture of the situation of graduates on the labour market and highlights useful information for finding one's way in the world of education.

Sources of data

Most of the information presented in Volume I is taken from the 1988 *National Graduate Survey* conducted among university graduates and from the 1988 *Relance* surveys conducted by the Department of Education of Quebec among secondary-school and college students. There is one important distinction between these two surveys: the scope of their coverage. The first consists of a follow-up of graduates two years after graduation, and the second group of surveys provides information about the situation of graduates only one year after graduation. As a graduate's situation can change dramatically from one year to the next, any comparisons between these two surveys must take into account this distinction.

Other sources of information have been used in the preparation of the first volume. Thus, the data on past growth in the proportion of graduates by discipline at the college and university levels are taken from an annual catalogue issued by Statistics Canada entitled *Education in Canada* (Catalogue 81-229). The data for the secondary vocational sector are, for their part, estimates made on the basis of the composition of graduates by discipline in the private and public sectors over the past few years. Finally, estimates for the coming decade are taken from the Canadian Occupational Projection System and reflect the demographic trends for the age group corresponding to the level of education concerned.

Definitions

Graduate in the labour market: a graduate who, at the time of the survey, was not studying full time and who was either employed or looking for a job.

Employed graduate: a graduate who, at the time of the survey, was not studying full time and who was employed.

Unemployed graduate: a graduate who, at the time of the survey, was neither studying full time nor employed but who was looking for a job.

Graduate not in the labour market: a graduate who, at the time of the survey, was either studying full time or unemployed and who was not looking for a job.

Graduate in school: a graduate who, at the time of the survey, was studying full time.

Graduate who is neither employed nor in school: a graduate who, at the time of the survey, was not studying full time, was not employed and was not looking for a job.

Participation rate: proportion of all graduates who are in the labour force.

Employment rate: proportion of all graduates who are employed.

Placement rate: proportion of graduates in the labour market who are employed.

Unemployment rate: proportion of all unemployed graduates in the labour market.

Work-education link: This link was established by the graduates themselves. There were three possible answers: direct link, indirect link and no link.

Market growth index: This index is the ratio obtained by dividing the demand in related occupations by the number of graduates. This is a comparative index for which the situation during the 1985-90 period is equivalent to one. This index indicates whether market conditions will tend to deteriorate (smaller than one) or improve (greater than one) for graduates in a given field of study.

Other important sources to consult

Job Futures - Quebec is not the only source of information on career opportunities. We therefore invite the reader to consult other sources that can provide additional information.

We draw the reader's attention to two documents published annually by the Department of Education of Quebec, namely *Relance au secondaire* and *Relance au collégial*, which present the results of these surveys. The Service régional d'admission du Montréal métropolitain (SRAM) also publishes on an annual basis the *Guide pratique des études universitaires au Québec* and the *Guide pratique des études collégiales au Québec*, which warrant careful examination.

For more detailed information on educational requirements, job descriptions or work conditions, readers may consult the Canadian Classification and Dictionary of Occupations (CCDO). Moreover, Employment and Immigration Canada administers the CHOICE program, an interactive computerized system that allows users to ask relevant questions on the careers open to them. More information on CHOICE may be obtained from any Canada Employment Centre.

Finally, a national version of *Job Futures* is also available.

PART I

OVERVIEW

CHOOSING THE TYPE OF TRAINING THAT MEETS MY NEEDS

As noted earlier, accurately identifying one's tastes, aptitudes and interests constitutes the first step in choosing a career. Nonetheless, this choice also requires that the consequences be properly weighed. How long will it take to complete the studies I am undertaking? What will be the employment outlook at the end of my studies? Into which occupational field will these studies lead me? These are all valid questions. The information given in the two volumes of *Job Futures - Quebec* attempt to give precise answers to these questions. But first it would be interesting to shed some light on the overall situation of graduates who have already entered the labour market.

The importance of general education

Data clearly show that education is the best form of employment insurance. Thus, while the average unemployment rate was 9.3% in 1989, it was 14.2% for those who had completed fewer than nine years of schooling, 10.7% for those with between nine and thirteen years of schooling, 7.2% for holders of a Diploma of Collegial Studies and 5.8% for university graduates. Thus, the more years of schooling graduates have, the smaller are their chances of being unemployed.

Over the next decade, factors such as the pressures of international competition which raise the level of excellence sought by employers, technological progress which is eliminating a large number of jobs involving physical strength or repetitive actions and the greater availability of a more educated labour force will create a situation in which a solid general education will more than ever be an indispensable prerequisite for success in the labour market.

The importance of vocational training

Although it significantly raises individuals' ability to adapt to change, a general education does not however guarantee easy access to the labour market. The practice of any occupation requires the acquisition of specific knowledge that can only be obtained through vocational training.

The professional skills needed for practising different occupations may be acquired in a number of ways. Thus, experience will continue to be a very important aspect of vocational training.

Access to positions of responsibility has always been based on recognition of previous achievements. Whether formal or not, on-the-job training will in this sense continue to provide individuals with the principal means of realizing their career aspirations. Thus, a solid general education and the acquisition of specific skills on the job may well constitute important assets for an interesting career.

Nonetheless, job specialization in a world where the technical aspect of tasks is assuming increasing importance means that the requirements for entering the labour market will also tend towards greater specialization. It will become increasingly difficult for candidates to enter the various occupations for the first time without the necessary basic skills. For newcomers on the market, a general education will increasingly have to be backed up with specialized training acquired within the regular education system (private or public). This will set them apart not only from other candidates but will allow them quite simply to enter the occupational field they have chosen.

If general education constitutes excellent long-term employment insurance, vocational training is, for its part, the best means of escaping the vicious circle of "no job because no experience and no experience because no job."

Duration of vocational training

In Quebec, vocational training is available at the secondary, college and university levels. These three levels serve very different clienteles as much from the standpoint of tastes and interests as that of motivation and aptitude with respect to studies.

The secondary vocational sector constitutes the shortest route to the labour market. For this training, students require ten years of general education and between one and three years of vocational training depending on whether they wish to obtain a certificate, a diploma or an Attestation of Vocational Specialization. This type of training usually leads to occupations that require theoretical knowledge but in which operational functions are predominant.

The vocational sector at the college level requires eleven years of general education and three years of vocational training leading to a Diploma of Collegial Studies. The occupations associated with this type of training generally require less manual dexterity but more in-depth theoretical knowledge. Operational functions are still important but, being less related to routine actions, they require better understanding and reasoning abilities.

University training is accessible after thirteen years of general education at the secondary and college levels. A minimum of three years of additional training leads to an undergraduate degree (bachelor's) to which may be added between two and five years of specialization for a graduate degree (master's and doctorate). The occupations associated with this type of training require primarily the ability to use abstract skills to solve concrete problems although manual operational functions may sometimes be important.

Popularity of vocational training

Each year, between 700,000 and 750,000 students are enrolled in regular education in Quebec. A large proportion of these graduates, about 70%, enter general training programs at the secondary and college levels, and between 200,000 and 250,000 young people enter the various vocational education programs. Of this number, nearly half are enrolled in programs at the university level, 30% at the college level and 20% at the secondary level.

During the 1980s, the popularity of vocational education at the secondary level declined dramatically when enrolment in a number of disciplines dropped by more than half. This drop had a positive effect on university enrolment in particular, which rose from an average of 97,000 over the first half of the decade to more than 105,000 as of 1986. The rise in the number of university students is also reflected in statistics for colleges which saw their vocational sector shrink over the same period, declining from an annual enrolment average of 49% to 45% between the first and second half of the 1980s.

TABLE I
GROWTH IN SCHOOL ENROLMENT IN QUEBEC
according to level of education and type of training

	1981-85		1986-90		1991-95		1996-2000	
	No.	%	No.	%	No.	%	No.	%
Secondary	565.1	69.1	467.8	64.1	496.7	67.1	483.6	66.2
General	492.1	60.2	423.4	58.0	451.1	61.0	439.1	60.1
Vocational	73.0	8.9	44.4	6.1	45.6	6.1	44.5	6.1
College	155.6	19.0	155.3	21.3	143.0	19.4	144.2	19.7
General	79.2	9.7	84.6	11.6	78.3	10.6	78.9	10.8
Vocational	76.4	9.3	70.7	9.7	64.7	8.8	65.3	8.9
University	97.0	11.9	106.8	14.6	100.0	13.5	103.4	14.1

Sources: Education in Canada, Statistics Canada, Catalogue 81-229, annual.
Strategic Planning Branch, E.I.C., Quebec Region.

The problem of drop-outs

The rise in university enrolment partly reflects the significant gains recorded by Quebec with respect to the education of its population. Nonetheless, it also denotes a degree of malaise in the vocational education sector. Each year, a large number of young people enter the labour market without having earned a vocational education diploma. Of these, a large number are from the general secondary and college sectors.

According to the Relance Survey conducted by the Department of Education of Quebec, more than 10% of the graduates in the general college sector were not pursuing full-time studies in the year after graduation. It is generally recognized that the drop-out rate is even higher after the first year. In the case of secondary school, the drop-out phenomenon seems to be as serious since about 13% of Secondary V graduates were not continuing their studies in the year after graduation.

Although some graduates take a temporary break from their studies, many of them do not go back to school. Many drop-out because of a poor academic choice that did not take into account the student's motivation and ability to pursue extended studies.

The consequences of dropping out of school are very serious. Placement data for drop-outs are very revealing in this respect. While unemployment was less than 9% for graduates in the college vocational sector, general sector graduates who had tried their luck on the labour market had an unemployment rate of nearly 20%. Moreover, only one out five jobs obtained by graduates in the general sector was linked to education, compared to four out five for their colleagues in the vocational sector. The discrepancies in salary were also very high between these two types of graduates, reaching more than $7,000 one year after graduation.

At the secondary level, the differences between graduates in the vocational and general sectors were slightly less pronounced from the standpoint of placement but were considerable with respect to employment satisfaction (work related to education) and salary. As regards salary, graduates in the vocational sector earned over 20% more compared to graduates in the secondary general sector who were working full time.

TABLE II
STATISTICS ON DROP-OUTS AT THE SECONDARY AND COLLEGE LEVELS
Quebec 1988

Level of education	Participation rate %	Placement rate %	unemployment rate %	Related jobs %	Unrelated jobs %	Average income $
Gen.sec.						
N-grads	55.2	80.9	19.1	8.5	91.5	$11,200
Grads	13.4	81.0	19.0	10.4	89.6	$10,800
Voc.sec.						
N-grads	82.1	69.4	30.6	22.6	77.4	$12,400
Grads	83.9	79.5	20.5	66.0	34.0	$13,300
Sec.gen.						
N-grads	46.2	78.4	21.6	8.1	91.9	$9,700
Grads	11.2	80.7	19.3	19.2	80.8	$9,300
Voc.col.						
N-grads	66.6	80.3	19.7	31.7	68.3	$12,700
Grads	82.3	91.5	8.5	80.9	19.1	$17,700

Source: Relance Survey, Department of Education of Quebec, 1988.

The repercussions of dropping out before obtaining a diploma are equally unfortunate for students, but differ according to the type of training. Although obtaining a diploma does not seem to affect employment opportunities for students in general education in any significant way, the situation is very different for students in the vocational sector. For the latter, dropping out of school greatly lowers their chances of finding a job, and if they do find one it is generally less related to education and less well paying.

In the college vocational sector, the unemployment rate for drop-outs was more than double that of graduates, the proportion of related jobs twice as low and income for the first year 30% lower. In the secondary vocational sector, the likelihood of unemployment was 50% higher for drop-outs than for graduates and that of finding a related job nearly 70% lower. However, the differences in salary between the two groups were nonetheless less pronounced since in the first year drop-outs earned only 5% less than graduates.

Overall, it appears that graduates in the vocational sector enjoy more of an advantage on the labour market than their colleagues in the general sector but this advantage is almost completely neutralized by dropping out of school before obtaining a diploma. Note also that the Diploma of Collegial Studies (general sector) which is earned over a two-year period does not significantly improve the chances of entering the labour market for the first time any more than a secondary-school diploma does.

This discussion is intended to show the importance of seeing one's choice through to the end. As much as possible, students are well advised to avoid choices that involve a high risk of dropping out of school, particularly at the college level, and to remember that several vocational disciplines at the college level offer better job prospects than unfinished university studies.

Graduates and the labour market

We have just seen that dropping out of school is surely the main obstacle faced by students. In order to better judge the merits of education in the search for employment, let us now examine the situation of graduates who persevered in their studies.

It is interesting to note that nearly one out of four undergraduate students decided to continue their studies immediately after obtaining their first degree. This proportion was considerably higher than the proportion for other levels of education, which varied between 7 and 17%.

TABLE III
GRADUATES' ENTRY INTO THE LABOUR MARKET
according to level of education, Quebec 1988

Status on the labour market	Secondary vocational %	College vocational %	Bachelor's degree %	Master's degree %	Doctoral degree %
In labour force	84	82	74	81	90
Employed	67	75	67	76	83
Unemployed	17	7	7	5	6
Not in labour force	16	18	26	19	10
Students	12	16	24	17	7
Other	4	2	2	2	3
Graduates (number)	9,114	10,546	20,595	3,965	235

Sources: National Graduate Survey, Statistics Canada, 1988
Relance Survey, Department of Education of Quebec, 1988

TABLE IV
CHARACTERISTICS OF THE JOBS OBTAINED according to level of education, Quebec 1988

Education-work link	Secondary vocational %	College vocational %	Bachelor's degree %	Master's degree %	Doctoral degree %
Direct	46	51	57	58	80
Indirect	20	31	30	34	17
None	34	18	13	8	3
Employed (number)	6,076	7,945	13,799	3,013	195
Average annual salary[1]	$13,600	$17,800	$26,600	$36,400	$42,300

1: based on the salary of graduates working full time.
Sources: National Graduate Survey, Statistics Canada, 1988.
Relance Survey, Department of Education of Quebec, 1988.

The unemployment rate also tells us a good deal about employment opportunities. In general, entry into the labour market appears to be facilitated by increased education. Thus, the unemployment rate was higher for graduates in the secondary vocational sector, reaching 20% compared to 6.7% for those with doctoral degrees.

This general statement must nonetheless be attenuated somewhat by the fact that graduates with bachelor's degrees appeared to experience slightly more difficulties than their peers in the college vocational sector. In fact, the unemployment rate for the latter was one percentage point lower than that of graduates with bachelor's degrees. This was true even though statistics for these two categories of graduates were not available on the same basis, i.e. one year after graduation for CEGEP graduates and two years for university graduates, which should give university graduates an advantage from the outset. Placement statistics at the university level differ from those of college vocational graduates only at the master's level.

Like placement, the link between education and work also tended to increase with education. This time, however, graduates with bachelor's degrees had a slight advantage over college graduates since only 13% of them had found a job that was not at all related to education compared to 18% for CEGEP graduates. A positive link with education was also noted with respect to salary. It should be remembered that the data presented in Table IV are based on information compiled one year after graduation for secondary and CEGEP students and two years after graduation for university students.

The situation by field of study

Naturally, the outlook that is briefly described here must be qualified according to field of study. Some disciplines offer better employment opportunities than others at an equivalent or even higher level. Everyone is very aware of this fact which explains why the most common question is: Which fields of study offer the best job opportunities?

Unfortunately the answer is not a simple one and often does not correspond to what people want to hear. In fact, there is no training that can guarantee a job, any more than there is training for which it can be said that job opportunities are nonexistent. A person who is ready to make an effort, who is more motivated than the average person and who likes what he or she is doing, will often surmount the obstacles presented by a field of training offering rather limited job prospects at the start. This person, however, should first have thoroughly assessed the problems that lie ahead. Conversely, a person who chooses a career path that he or she dislikes from the start, on the sole basis that it offers good opportunities on the labour market, is headed for failure most of the time.

Be that as it may, the fact remains that on average some disciplines offer better opportunities for entering the labour market. Thus, the considerable technological changes that have occurred over the past few years and which will accelerate in the future, greatly favour the disciplines that are most closely related to them. This is the case especially for engineering disciplines at the university level and community college technologies in applied sciences such as engineering, electronics and robotics, to name only a few. Secondary-school training is not outdone in this respect and the technologies associated with the operation of new industrial equipment also offer better employment opportunities.

The health sector is one of the sectors providing better employment opportunities at all levels of education. The placement rate for graduates in the various health-care disciplines is high. The ageing of the population will serve to maintain demand for these professionals over the next few years. Furthermore, enrolment in a number of school disciplines at the secondary and college levels has experienced a dramatic decline over the last decade, and this has contributed to shortages of qualified labour in nursing care in particular.

The computer science sector, which has grown considerably over the last two decades, will continue to provide work for many graduates. The popularity of this sector with young people has resulted in large numbers of them entering the labour market each year and the growth in employment will continue to provide opportunities for most of them. In addition, these graduates benefit from a certain versatility with respect to a labour market requiring increasingly more basic knowledge in computer science.

Administrative jobs will continue to provide work for a large number of graduates. Upper management positions are nonetheless only attained in the course of a career and are less and less directly accessible to young graduates. Management studies remain a good choice, but increasingly from the viewpoint of complementary training. They also provide access to the labour market for graduates who are willing to learn the ropes in middle management positions in the case of university graduates or clerical jobs in the case of graduates of college technology programs.

As in recent years, graduates in arts disciplines will encounter the most difficulties. Likewise, social sciences graduates will continue to face budget constraints from their main employer, the government. The number of graduates in these disciplines continues to be high despite the limited number of job openings, making the market very competitive. This situation is reflected in generally lower placement rates for these graduates. Finally, physical science graduates continue to face more difficulties on the labour market than their colleagues in applied sciences. Although promising, certain disciplines such as those associated with biotechnology have yet to see the anticipated job creation become a reality, at least at a rate that would allow a large proportion of graduates to be absorbed into the labour market.

As you may have realized by now, it is difficult to provide a simple answer to such a complex question and the partial answers given here only scratch the surface of the subject. Above all, these partial answers necessarily simplify a subject that only a more in-depth analysis could describe adequately. We therefore invite you to consult the more detailled information by discipline and by occupation contained in the two volumes of *Job Futures - Quebec* which we hope will assist them in making better choices.

Good luck!

PART II

FIELDS OF STUDY

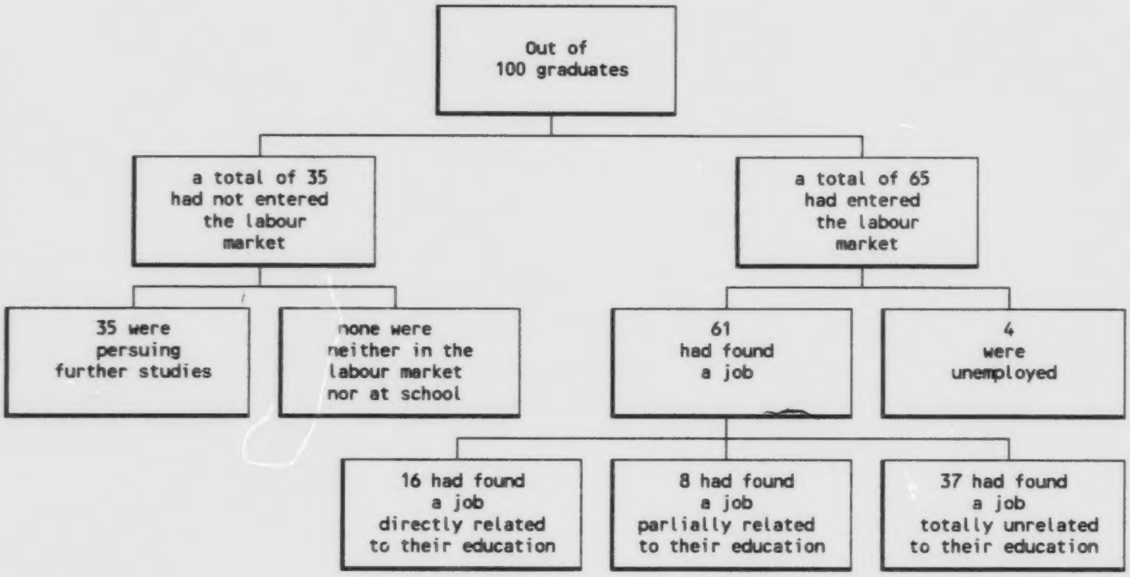
ARTS

FINE ARTS

ARTS

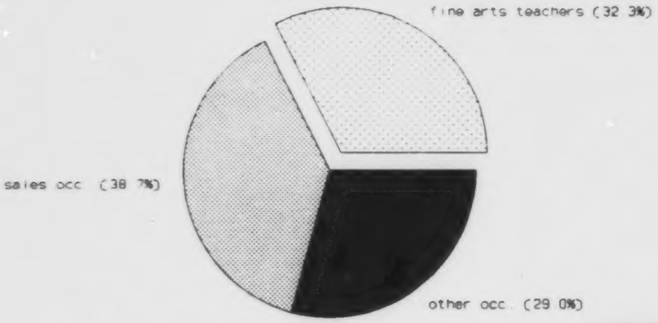
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
35 were persuing further studies
none were neither in the labour market nor at school
61 had found a job
4 were unemployed
16 had found a job directly related to their education
8 had found a job partially related to their education
37 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	1.0	0.4
1985/90	55	0.4	1.0
1990/95	50	0.4	1.5
1995/2000	50	0.4	1.8

FINE ARTS
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses disciplines related to music, theatre and dance. These programs are offered by a small number of institutions, the main ones being the Drummondville, Alma, St-Laurent and Vanier Cegeps for music, Dawson, John Abbott, Lionel-Groulx and St-Hyacinthe for theatre and Vieux-Montréal for dance.

Trends and projections

From an average of 140 during the first half of the 1980s, the number of graduates in these various disciplines dropped to an average of 55 during the 1985-90 period. This represented a substantial decrease in popularity if we consider that their relative importance in relation to vocational college disciplines taken as a whole slipped from 1% to 0.3% during the same period. If their relative weighting remains the same over the coming years, an average of 50 students will graduate annually.

Occupation after graduation

The results of the Relance Survey conducted by the Department of Education clearly show the difficulties graduates in these disciplines encounter on the labour market. Less than 25% of them held a job that was at least partially related to their education after graduation. It is therefore not surprising to note that 35% of them had decided to pursue their studies further. Nevertheless, the placement rate for those who had entered the labour market was comparable to that for the average of graduates.

Occupational profile

The high placement rate for graduates who had entered the labour market can be explained primarily by the general nature of the jobs obtained. In particular, nearly 40% of them were classified in the clerk-salesperson group, one which serves as a stepping stone for all young people who have little or no experience. About 30% of these graduates held jobs in groups associated with the arts sector. In this respect, the group of musicians, with all the jobs in this category, seemed to offer the best market entry opportunities.

General picture

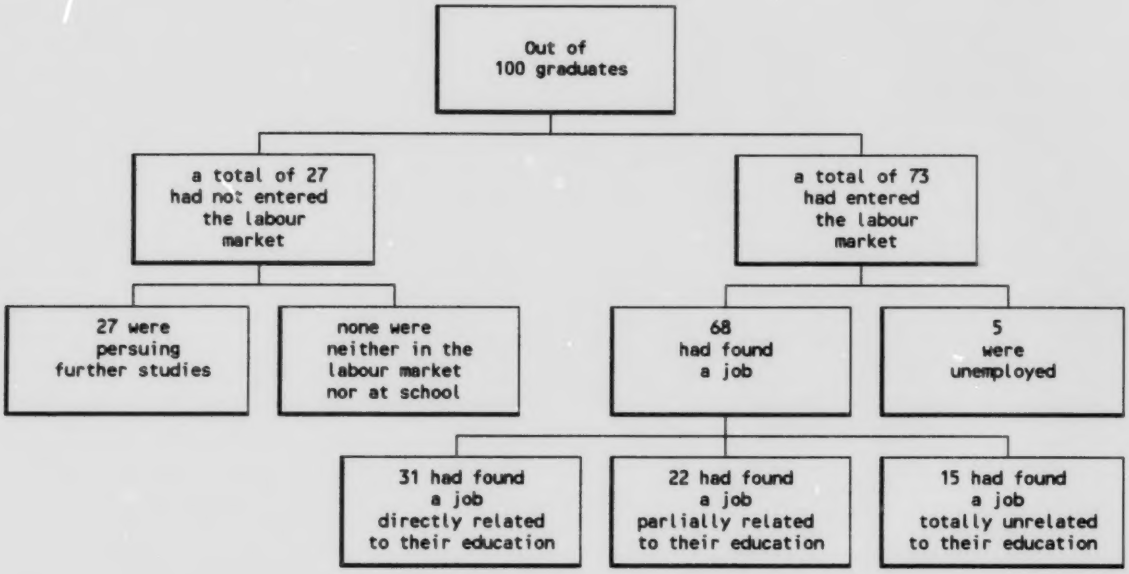
Employment opportunities in occupations related to education for graduates in this sector are among the most difficult of the various vocational college disciplines. Faced with this situation, a number of these graduates had no choice but to pursue further studies or to enter the labour market in jobs that were not specialized but which were easier to access. There is also a high proportion of part-time jobs.

The labour market situation for these graduates should not see major changes over the next decade. Opportunities for success will continue to depend on personal involvement, perseverance and talent.

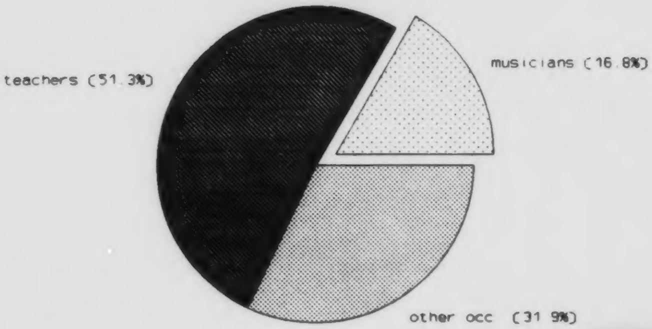
MUSIC
BACHELOR'S DEGREE

ARTS

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 27
had not entered
the labour
market
a total of 73
had entered
the labour
market
27 were
persuing
further studies
none were
neither in the
labour market
nor at school
68
had found
a job
5
were
unemployed
31 had found
a job
directly related
to their education
22 had found
a job
parlially related
to their education
15 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	220	1.0	0.5
1985/90	270	1.1	1.0
1990/95	300	1.2	0.9
1995/2000	300	1.2	1.0

ARTS

MUSIC
BACHELOR'S DEGREE

This field of study encompasses the different specialized disciplines related to the study of music, except for music teaching, which is included under the heading "Elementary-Secondary Teacher Training." Concordia, Laval, McGill, Montréal and UQAM all offer programs in music teaching. Bishop's, Concordia and McGill offer a major. There are usually music prerequisites, and many of the universities hold auditions.

Trends and projections

The number of music graduates as a proportion of the total number of graduates with bachelor's degrees has remained about 1% since the late 1970s. Whereas slightly more than 200 musicians obtained degrees in 1980, the number was more than 250 in 1988. During the 1990s, some 250 to 300 degrees will be granted each year, if the trends of the past few years continue.

Occupation after graduation

Proportionately, as many music graduates as other graduates with bachelor's degrees enter the labour force. The survey of 1986 graduates revealed that nearly 70% were working two years after graduation. The proportion of graduates working in an occupation not related to their education was somewhat higher than in other disciplines, however. Proportionately, the same number of music graduates as graduates in other disciplines decided to continue their education beyond the undergraduate level.

Occupational profile

A significant number of these graduates find jobs in teaching. Fully 50% of those who were working two years after graduation were teaching kindergarten or primary school (20%), fine arts (15%) or in some other area. All the same, 15% were actually working as musicians.

General picture

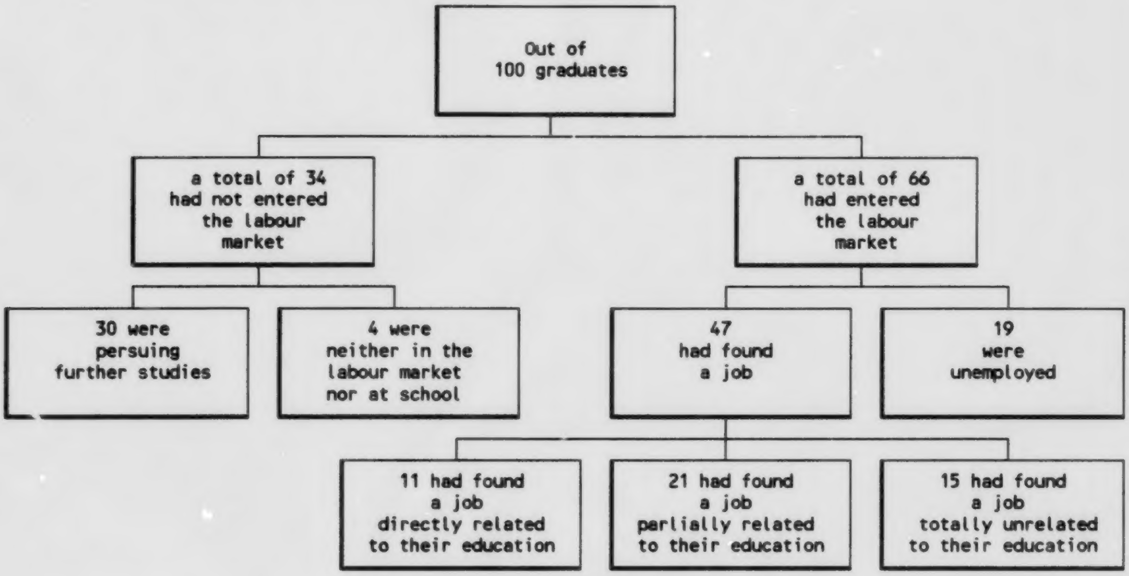
Although we do not, unfortunately, have any statistics on salaries, all indications are that music graduates find themselves in a labour market position comparable to that of other graduates with bachelor's degrees. The only fly in the ointment is that it is more difficult for them to find jobs related to music.

During the 1990s, graduates in this field of study interested in a teaching career may be favoured by the replacement needs that will be created by the aging of the teaching population. Those seeking a career as a professional musician will continue to be subject to the tough laws governing the arts world.

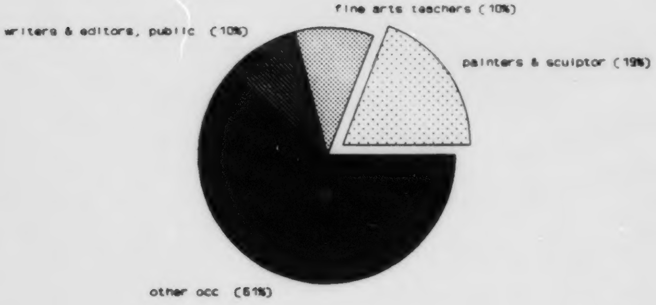
OTHER PERFORMING ARTS AND FINE ARTS

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 34 had not entered the labour market
a total of 66 had entered the labour market
30 were persuing further studies
4 were neither in the labour market nor at school
47 had found a job
19 were unemployed
11 had found a job directly related to their education
21 had found a job perlially related to their education
15 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	350	1.6	1.4
1985/90	390	1.6	1.0
1990/95	400	1.6	1.0
1995/2000	400	1.5	1.0

OTHER PERFORMING ARTS AND FINE ARTS
BACHELOR'S DEGREE

This field of study encompasses the specialized disciplines of the arts in general, fine arts, painting, sculpture, dance and drama. Most Quebec universities offer various programs in one or another of these disciplines. Prerequisites vary depending on discipline, and placement tests and auditions are usually held.

Trends and projections

The popularity of this field of study has been more or less constant over time, and Quebec universities have granted approximately 1.5% of their bachelor's degrees to students in these different disciplines each year since the late 1970s. If this proportion remains unchanged, demographic trends will translate into 400 graduates annually over the coming decade.

Occupation after graduation

Graduates in these disciplines are confronted with a much bleaker labour market than other groups of graduates with bachelor's degrees. According to the 1988 survey of 1986 graduates, barely 47% had entered the labour market compared with 67% of first degree graduates taken as a whole. And the unemployment rate among these graduates reached 19%, one of the highest of any university discipline. All the same, most of the few graduates who were employed were working in jobs related to their education. The discouraging general picture probably explains in large part why many of these graduates decided to pursue further studies.

Occupational profile

Despite the difficult conditions, the career paths of graduates two years after graduation reflect the link they have maintained with their discipline. Approximately 20% were working as painters or sculptors, and a not insignificant number had entered the labour market in occupations such as fine arts teachers (10%) or book editors (10%).

Salary

In the 1988 survey of graduates, the average salary ($21,900) of respondents working full time was approximately 20% lower than the average salary of other graduates with bachelor's degrees.

General picture

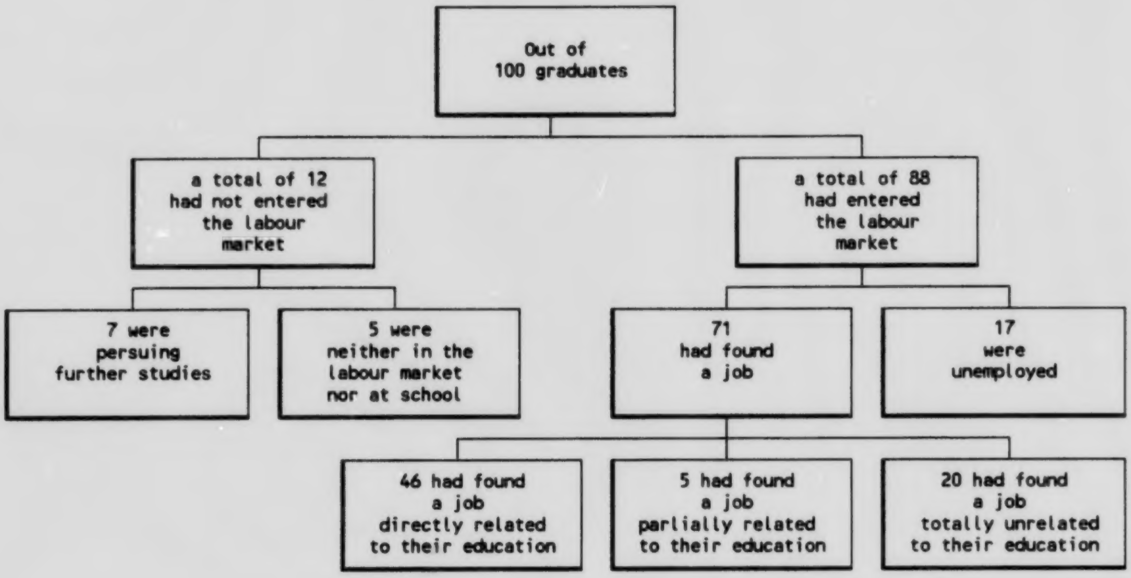
As the above analysis shows, the labour market conditions facing these graduates are among the most difficult of those awaiting graduates with bachelor's degrees. The placement rate is appreciably lower, while the unemployment rate is markedly higher than average. All the same, most of those who managed to find a job were working in a field related to their education. Because of these difficulties, a greater proportion decided to continue their education, and nearly 60% said they would not make the same choice if they could start over again.

During the 1990s, labour market conditions for these graduates will remain difficult, and chances of finding a job in this field, more than in any other, will depend on perseverance, enthusiasm and talent.

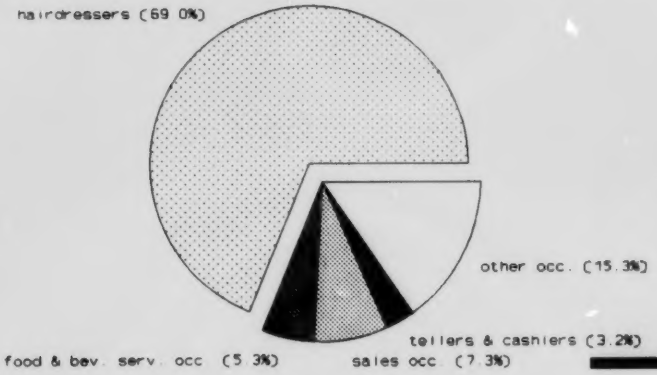
HAIRDRESSING **ARTS**

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
7 were persuing further studies
5 were neither in the labour market nor at school
71 had found a job
17 were unemployed
46 had found a job directly related to their education
5 had found a job parlially related to their education
20 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	2885	7.8	---
1985/90	1535	13.3	1.0
1990/95	875	9.3	1.0
1995/2000	915	9.3	1.0

ARTS

HAIRDRESSING
SECONDARY VOCATIONAL

This field of study includes men's hairdressing and women's hairdressing.

Trends and projections

Despite the drop in the number of graduates recorded in the first half of the decade, hairdressing is still one of the most popular disciplines together with secretarial studies and automobile mechanics. Some 1,500 hairdressers annually have been trained in various schools in recent years, i.e. nearly 15% of all the graduates in the secondary vocational sector.

Occupation after graduation

Seven out of ten graduates were employed at the time the Relance Survey was conducted. Since the participation rate in the labour market was 88%, one-fifth of the young people trained as hairdressers were unemployed, i.e. a proportion comparable to the average. Although the link between education and work was closer than in other disciplines, part-time jobs were more numerous (20% of jobs).

Occupational profile

The close link between education and work was clearly shown by the fact that 70% of the graduates who had found a job were working as hairdressers. Of those who were not working in hairdressing, jobs in the office work and sales category were the most frequent.

Salary

At $8,800 for the first year, the basic average salary of graduates working full time was one of the lowest earned by secondary vocational professionals. Nonetheless, part of the remuneration for these workers also comes from tips, which do not appear in the basic salary.

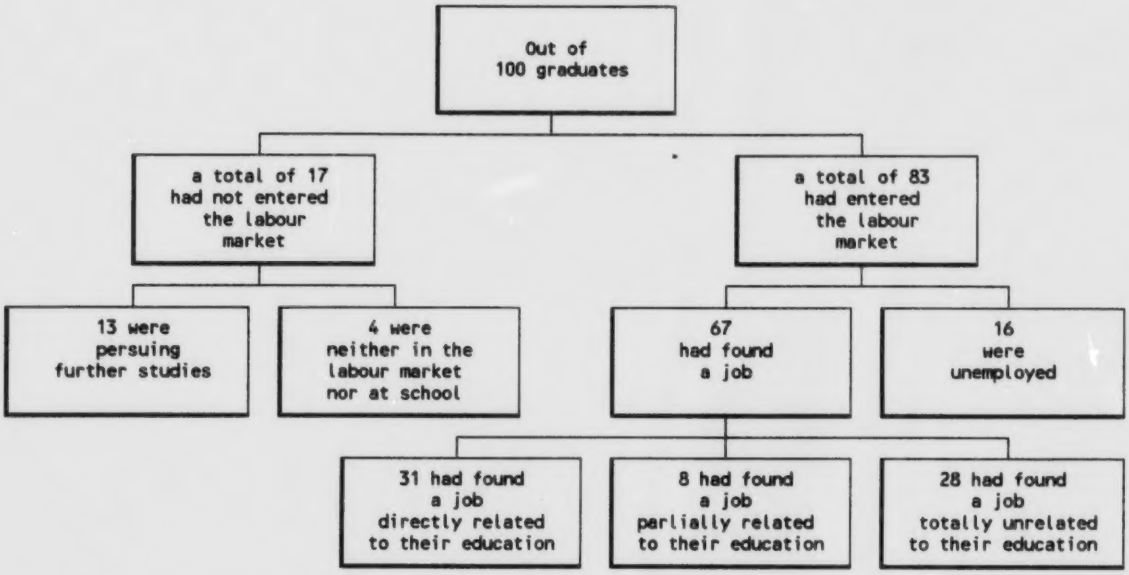
General picture

The high turnover rate of hairdressing personnel is such that each year the numerous requirements for replacements inflates the already high demand resulting from employment growth. Thus, even if traditionally the number of graduates greatly surpasses the employment growth in the hairdressing sector, job opportunities for these graduates remain good. Employment in related occupations in this sector, however, is usually had at the expense of a lower basic salary and work conditions that include broken schedules corresponding to business hours. Part-time jobs are frequent.

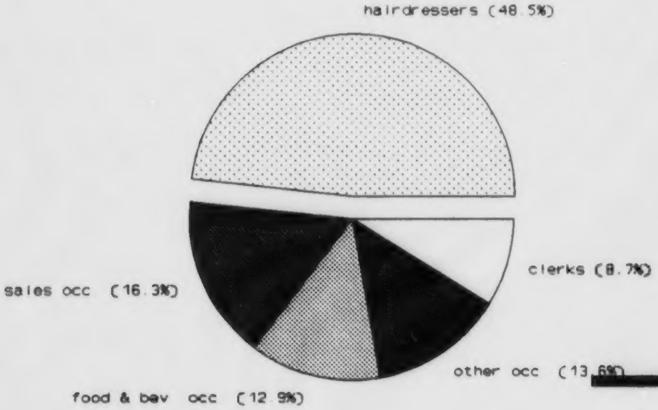
The employment outlook is expected to change very little over the next few years.

ESTHETICS **ARTS**
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
13 were persuing further studies
4 were neither in the labour market nor at school
67 had found a job
16 were unemployed
31 had found a job directly related to their education
8 had found a job parlially related to their education
28 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	800	2.7	---
1985/90	475	4.1	---
1990/95	280	3.0	---
1995/2000	290	3.0	---

ESTHETICS
SECONDARY VOCATIONAL

This field of studies includes the specialties of beauty care, cosmetics application and hair removal.

Trends and projections

Although it dropped by some 40% since 1981, the number of graduates in this field has remained more stable than in other disciplines, with its share of the total rising from 2.7% to 4.1%.

Occupation after graduation

About 80% of the graduates who entered the labour market were employed one year after graduation. One in five graduates in the labour force was unemployed, i.e. a proportion comparable to the average for the secondary vocational sector. The link between work and education was tenuous since more than 40% of the employed graduates considered their duties to be completely unrelated to their training.

Occupational profile

The group of hairdressers which includes cosmetologists, estheticians and hair-removal specialists, was the largest with nearly half the jobs. Outside this group, the occupational groups of sales and services were the most frequently encountered.

Salary

The average annual income of these graduates one year after graduation was only $8,900 according to the 1988 survey. This salary level is one of the lowest at the secondary vocational level.

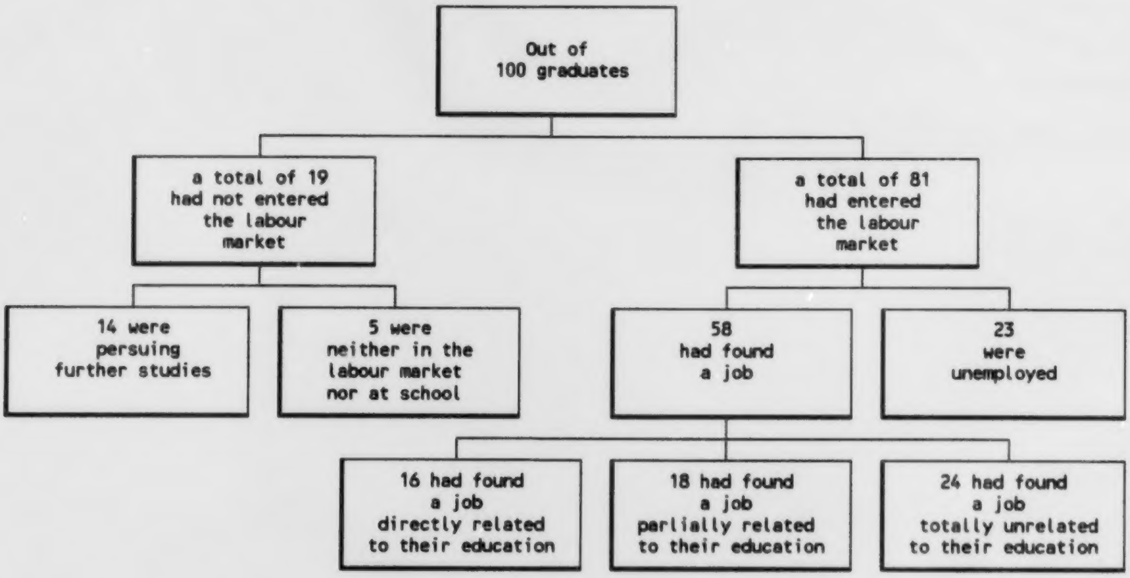
General picture

Placement opportunities for related occupations were slightly below average. The hairdressing and beauty care sector is very dependent on consumer spending. Thus, this sector greatly benefited from the vigorous growth in consumer spending after the 1981-82 recession. The last few years, however, have been marked by a slowdown in consumption which has of course reduced the growth rate in the demand for this type of professional. More consistent employment growth is expected for the 1990s but work conditions will continue to involve part-time work and working hours that reflect business hours.

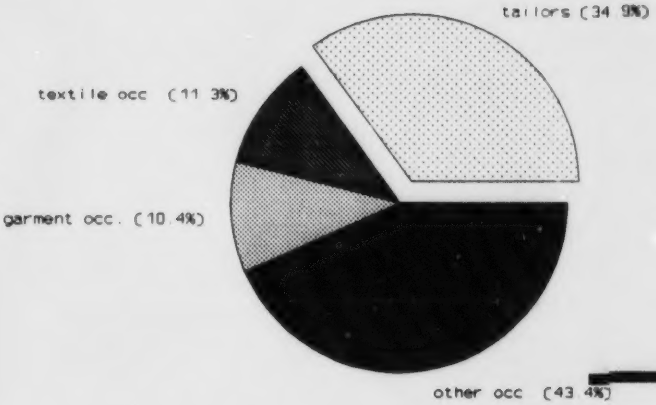
FASHION AND APPAREL **ARTS**

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
14 were persuing further studies
5 were neither in the labour market nor at school
58 had found a job
23 were unemployed
16 had found a job directly related to their education
18 had found a job partially related to their education
24 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	625	2.1	0.6
1985/90	170	1.5	1.0
1990/95	90	0.9	0.7
1995/2000	95	0.9	1.0

ARTS

FASHION AND APPAREL
SECONDARY VOCATIONAL

This field of study includes specialties dealing with the design, making, alteration and repair of clothing.

Trends and projections

Vocational education schools have seen enrolment in the various disciplines drop by more than two thirds over the last decade from an average of more than 600 during the 1985-90 period to less than 200 as of 1985.

Occupation after graduation

All the placement indicators tend to confirm the difficulties that these graduates face on the labour market. Their employment rate is one of the lowest at the secondary level since barely three out of five graduates had found a job, leaving nearly 40% of these graduates unemployed. The education-work link is also tenuous since in 70% of cases the jobs obtained were little or not at all related to training. Despite everything, very few of the graduates continued their studies further.

Occupational profile

The occupations that were in some way related to the making of clothes represented a little more than half the jobs obtained. The groups of tailors and unskilled workers in the clothing industry were the largest with 35% and 15% of the jobs respectively. Other graduates who had succeeded in finding jobs were working in quite a wide range of occupations in the categories of sales, office work and services.

Salary

In 1988, the average salary of the 1987 graduates was $9,300. This salary level is one of the lowest among the various disciplines at the secondary level.

General picture

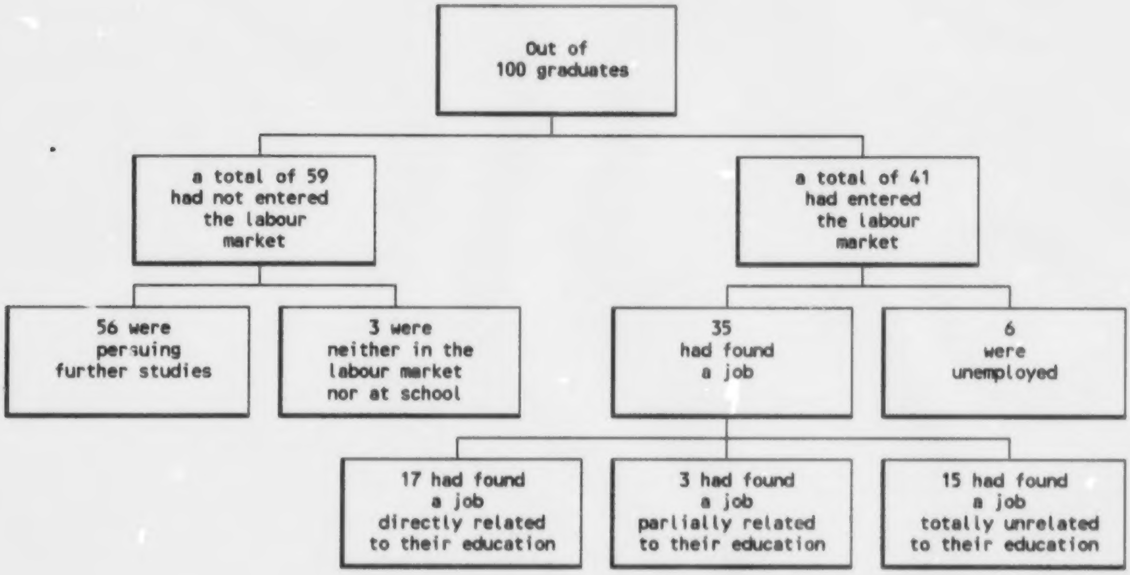
The employment outlook for these disciplines are among the most difficult of the various disciplines at the secondary level. The difficulties experienced by the clothing sector with respect to international competition have a lot to do with the labour market situation. More oriented towards the making of clothing than their colleagues at the college level, secondary graduates have also been more adversely affected than the latter by unfavourable market conditions. Nonetheless, until now only a small number of these graduates have entered the alteration sector in large stores. Yet this sector is characterized by stronger growth and in this respect provides great job opportunities.

INTERIOR ARRANGEMENT

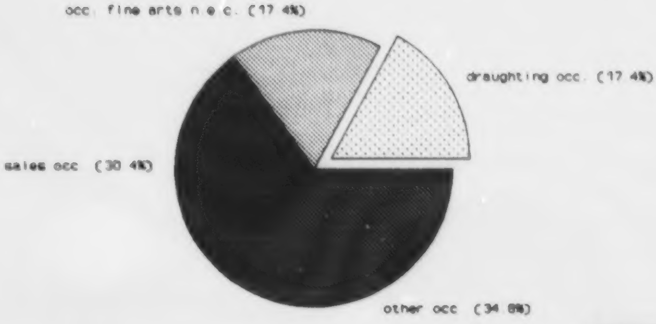
ARTS

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 59
had not entered
the labour
market
a total of 41
had entered
the labour
market
56 were
persuing
further studies
3 were
neither in the
labour market
nor at school
35
had found
a job
6
were
unemployed
17 had found
a job
directly related
to their education
3 had found
a job
parlially related
to their education
15 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	180	0.6	0.3
1985/90	75	0.6	1.0
1990/95	85	0.9	0.8
1995/2000	90	0.9	0.8

INTERIOR ARRANGEMENT
SECONDARY VOCATIONAL

This field of study includes the disciplines of interior arrangement and displaying.

Trends and projections

After reaching an all-time high of some 290 graduates at the beginning of the decade, these study programs saw their popularity decline considerably in the following years when the annual number of graduates dropped to only 75.

Occupation after graduation

This field of training, which has a counterpart at the college level, leads a number of students to continue their studies. At least 55% of the 1987 graduates chose this program compared to an average of little more than 10% for all secondary vocational graduates. The results of those who had decided to enter the labour market showed the difficulties they faced in finding related employment. In fact, even though most of them had found a job, only three out of five performed duties that were in some way related to their education.

Occupational profile

The related jobs found by these graduates were as draftsmen/women (25%) and fine arts professionals (15%) among whom may be found the occupations of painter-decorator and decorator-display artist.

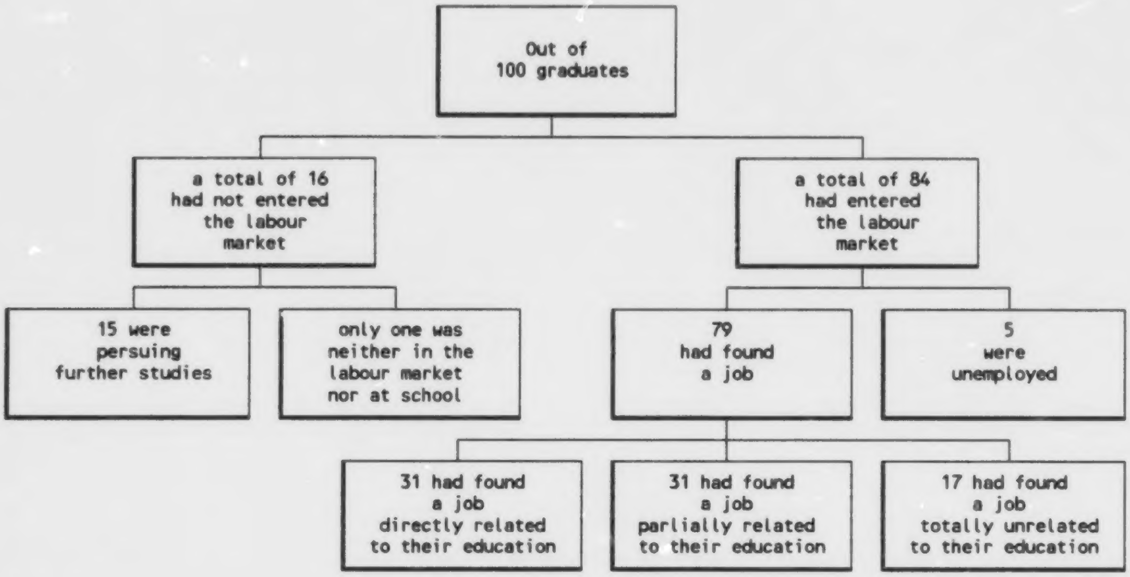
General picture

In light of the results obtained on the labour market, these graduates face more difficult market conditions than the average.
Nonetheless, they have the opportunity to continue their studies at the college level in related disciplines and thus improve their job prospects, which in recent years have benefited from the proliferation of consulting services in the furniture and home accessory business. The employment outlook for professionals in interior arrangement is expected to remain closely linked to sales.

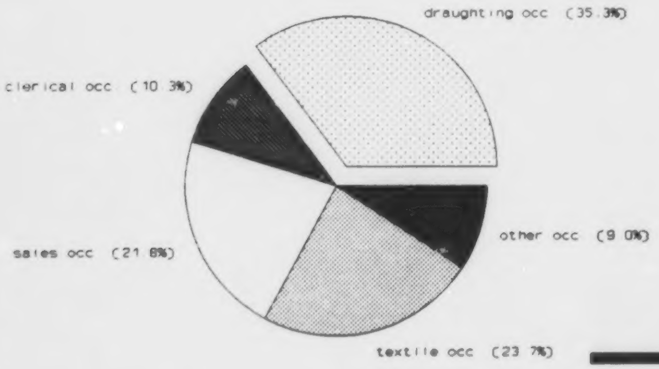
CREATIVE ARTS **ARTS**

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 16 had not entered the labour market
a total of 84 had entered the labour market
15 were persuing further studies
only one was neither in the labour market nor at school
79 had found a job
5 were unemployed
31 had found a job directly related to their education
31 had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	210	1.4	0.3
1985/90	175	1.2	1.0
1990/95	160	1.1	0.8
1995/2000	170	1.1	0.9

ARTS

CREATIVE ARTS
VOCATIONAL COLLEGE DIPLOMA

This field of studies encompasses the specialties of interior design, fashion design, men's fashion design and women's fashion design.

Trends and projections

As in other arts disciplines, over the 1980s the number of graduates dropped at a slightly more rapid rate than that observed for the disciplines taken as a whole. Given the expected decrease in the school population, the number of these graduates should continue its downward course to reach an average of 160 to 170 over the next decade.

Occupation after graduation

In the year after graduation, the unemployment rate for graduates who had entered the labour market was only half as great as the average for vocational college graduates. This good performance, however, was at the cost of a less direct link between education and work since barely 40% of them described a direct link.

Occupational profile

Among the most closely related occupations, the positions of designer and illustrator offered the best job prospects. Nearly 35% of the employed graduates were working as interior decoration consultants, designers or fashion designers, exhibition and display designers, etc. For their part, the groups associated with textile production or clothing accounted for nearly 25% of the jobs obtained. In this category, we found occupations that were more closely related to education such as those of patternmakers and tailors but also other, less directly related jobs, such as foremen/women, inspectors and labourers. Finally, the sales categories constituted the third largest group, with 20% of the jobs.

Salary

The average salary of graduates who were working full time one year after graduation was $13,600 annually. This salary level was much lower than the average salary of graduates in the vocational sector, who earned $17,800.

General picture

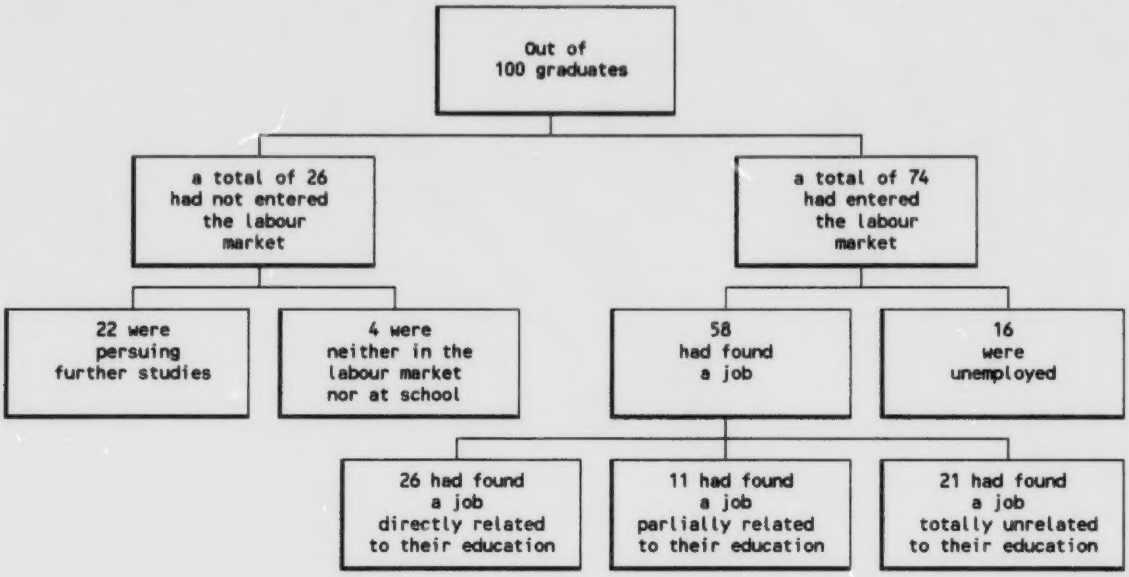
Prospects for labour market entry were severely affected during the 1981-82 recession. The years of vigorous growth which followed made placement recovery possible in related occupations, without however reaching the average for the college level.

Employment prospects, which are highly dependent on the textile and clothing sector, are suffering from the constraints imposed by restructuring in the sector to meet the stiff competition of imports from countries with low mass production costs. A tight market and competition from countries with a good reputation for top-of-the-line products also make access to fashion-related occupations difficult.

With respect to interior decoration, the opening up of consultant services in the retail furniture and decoration accessories business has certainly helped to democratize access to these services and prompted a faster expansion of job opportunities. It is expected that job prospects for these graduates will continue to be the same during the next few years, while remaining closely linked to sales.

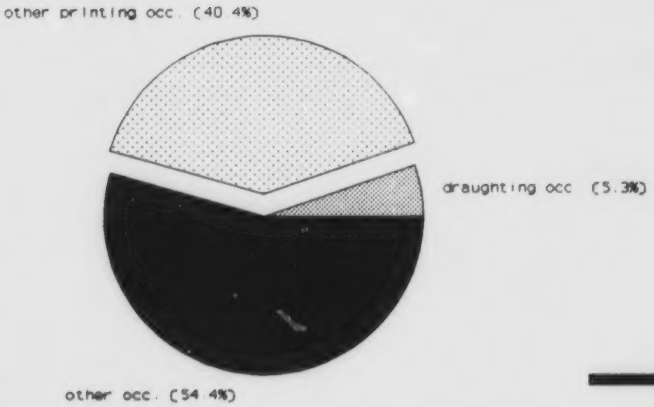
PRINTING AND ADVERTISING ARTS
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 26 had not entered the labour market
a total of 74 had entered the labour market
22 were persuing further studies
4 were neither in the labour market nor at school
58 had found a job
16 were unemployed
26 had found a job directly related to their education
11 had found a job parlially related to their education
21 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	595	2.0	0.1
1985/90	255	2.2	1.0
1990/95	295	3.1	0.3
1995/2000	310	3.1	0.5

PRINTING AND ADVERTISING
SECONDARY VOCATIONAL

This field of study includes the specialties of offset and automatic platen printing, photolithography and commercial drafting.

Trends and projections

The popularity of these disciplines have followed that of the secondary professional sector taken as a whole and have maintained their share of total graduates.

Occupation after graduation

A large number of these graduates continued their studies after graduation. Thus, less than three out of five graduates were employed at the time of the 1987 Relance Survey. The unemployment rate among these graduates was 20% compared to an average of 15% for secondary vocational graduates in the labour force. Although an above-average proportion of these jobs were directly related to education, jobs that were unrelated to studies were also proportionally more numerous. However, part-time as well as temporary jobs were less frequent.

Occupational profile

Unlike their older colleagues in college, the occupational profile of these secondary graduates was dominated more by jobs directly related to printing than to commercial drafting. While 30% of the graduates in the latter discipline were working as draftsmen/women, 45% of those in printing technology were working in one of the occupational groups in printing. These were the more accessible press operator jobs, with 20% of the jobs obtained by graduates in printing technology. Like many other sectors in secondary vocational education, young people who had found work that was unrelated to their studies had looked to less specialized jobs as unskilled workers or clerks.

Salary

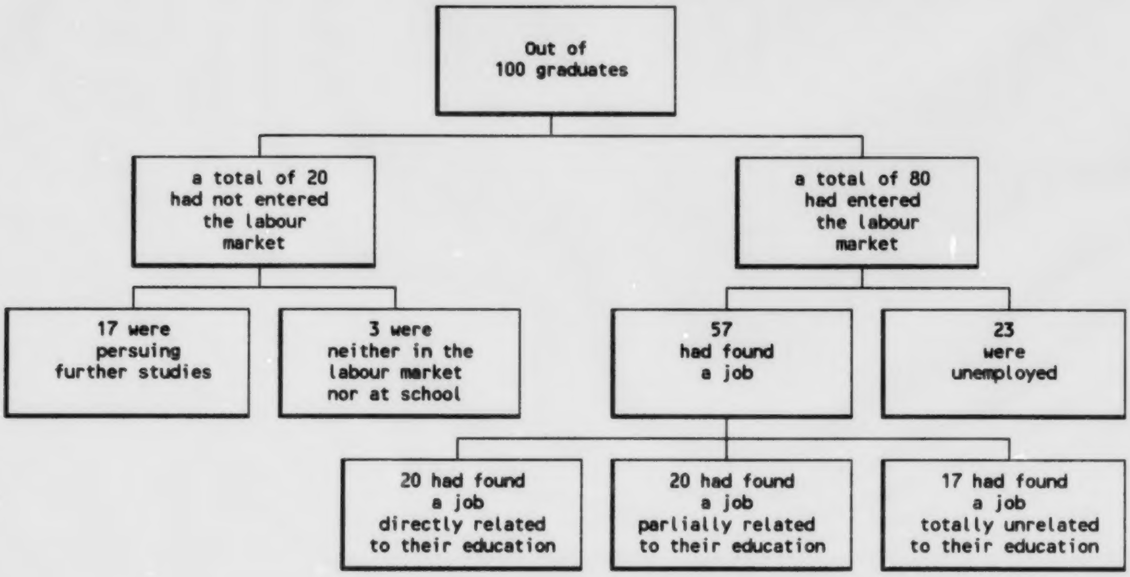
At $13,000 the first year, the average annual salary of graduates working full time was somewhat lower than that of secondary vocational graduates taken as a whole.

General picture

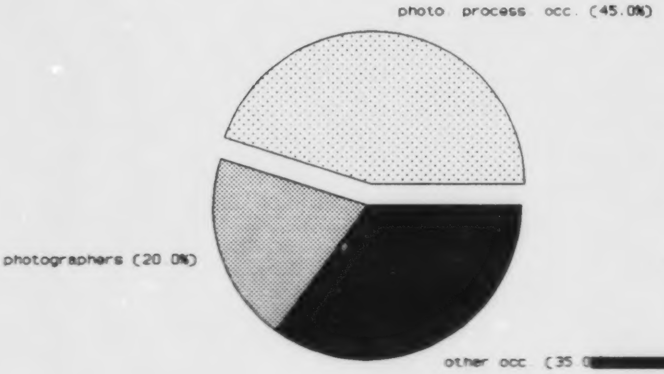
Over the past few years, these graduates faced more difficulties entering the labour market than their colleagues in other disciplines. Significant technological changes have occurred in the printing sector, thus creating new demand for personnel skilled in the use of new equipment. In this respect, college-level graduates appear to have benefited more from this growth than graduates at the secondary level.

PHOTOGRAPHY **ARTS**
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 20 had not entered the labour market
a total of 80 had entered the labour market
17 were persuing further studies
3 were neither in the labour market nor at school
57 had found a job
23 were unemployed
20 had found a job directly related to their education
20 had found a job partially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	45	0.2	1.7
1985/90	40	0.3	1.0
1990/95	45	0.5	0.5
1995/2000	45	0.5	0.6

PHOTOGRAPHY
SECONDARY VOCATIONAL

This program is intended to teach photography techniques and photo lab techniques.

Trends and projections

The popularity of this discipline with young people in the secondary professional sector has remained steady over the past few years, attracting an average of 35 to 50 graduates per year.

Occupation after graduation

According to the 1988 Relance Survey, 20 of the 35 1986 graduates were employed one year after graduation. Although 14 of them had found jobs related to their education, seven of them were obliged to accept jobs which, in their opinion, were completely unrelated to their training.

Occupational profile

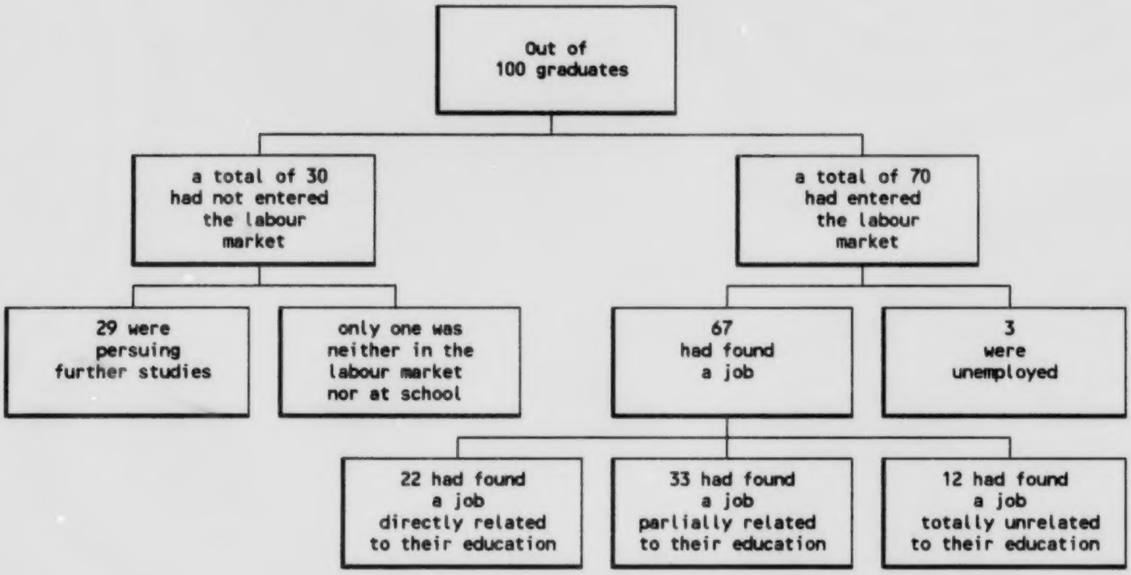
The most accessible related jobs for these graduates were those of photo lab technician, which accounted for nine of the 20 employed graduates. Only four of these graduates were working as professional photographers.

General picture

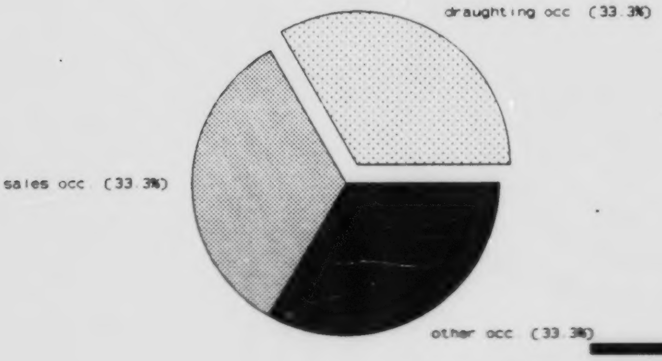
The employment opportunities for these graduates are limited and mostly related to lab technology rather than actual photography. More sophisticated equipment which reduces the requirement for specialized labour and rationalization in the sector limit job prospects even more. Without being inaccessible, the career of professional photographer requires long-term ambition.

COMMERCIAL AND ADVERTISING ARTS
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 30 had not entered the labour market
a total of 70 had entered the labour market
29 were persuing further studies
only one was neither in the labour market nor at school
67 had found a job
3 were unemployed
22 had found a job directly related to their education
33 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	0.9	0.3
1985/90	120	0.8	1.0
1990/95	110	0.7	0.9
1995/2000	115	0.8	1.0

ARTS

COMMERCIAL AND ADVERTISING ARTS

VOCATIONAL COLLEGE DIPLOMA

At the college level this field of study encompasses the specialties of window display design (Dawson, Rivière-du-Loup, Ste-Foy, Vieux-Montréal), industrial design technology (Vieux-Montréal, Ste-Foy) and fashion merchandising (Lasalle College, Notre-Dame de Foy campus).

Trends and projections

The popularity of this field of training decreased somewhat during the 1980s, with the number of graduates slipping from 140 to 120 on average between the first and the second half of the decade. This trend should continue over the coming decade due to the demographic decline which will affect young people. Thus, over the next decade an average of 110 to 115 graduates annually is anticipated in this discipline.

Occupation after graduation

According to the data gathered through the 1988 Relance Survey, a slightly lower than average proportion of graduates was entering the labour market. However, placement among these graduates was higher, as shown by their unemployment rate of 4.2% compared to 8.5% for vocational college graduates taken as a whole. The employed graduates nonetheless considered their duties to be less directly linked to education than the average, even if this link was considerable overall.

Occupational profile

Of the jobs directly related to education, the occupational group of designers, which accounted for nearly 40% of employed graduates, was the most frequently encountered. The other most represented groups were mainly in the category of specialized sales work.

Salary

Respondents to the survey who were working full time in the year after graduation were earning an average of $15,500 annually, a slightly lower level than the $17,800 average at the college level.

General picture

Compared to graduates in other collegial disciplines, the employment outlook in occupations directly linked to education appeared to be slightly lower than the average over the past few years. It is interesting to note that the outlook was further dimmed by the tighter job market which accompanied the 1981-1982 recession. It should also be noted that these graduates shared essentially the same market as university graduates in applied arts. Even if their placement rate, all occupations considered, appeared to be to their advantage, that of more directly linked occupations (designers and illustrators) reached 70% among graduates with bachelor's degrees. It is therefore not surprising to note that an appreciably higher than average proportion of these graduates decided to pursue further studies.

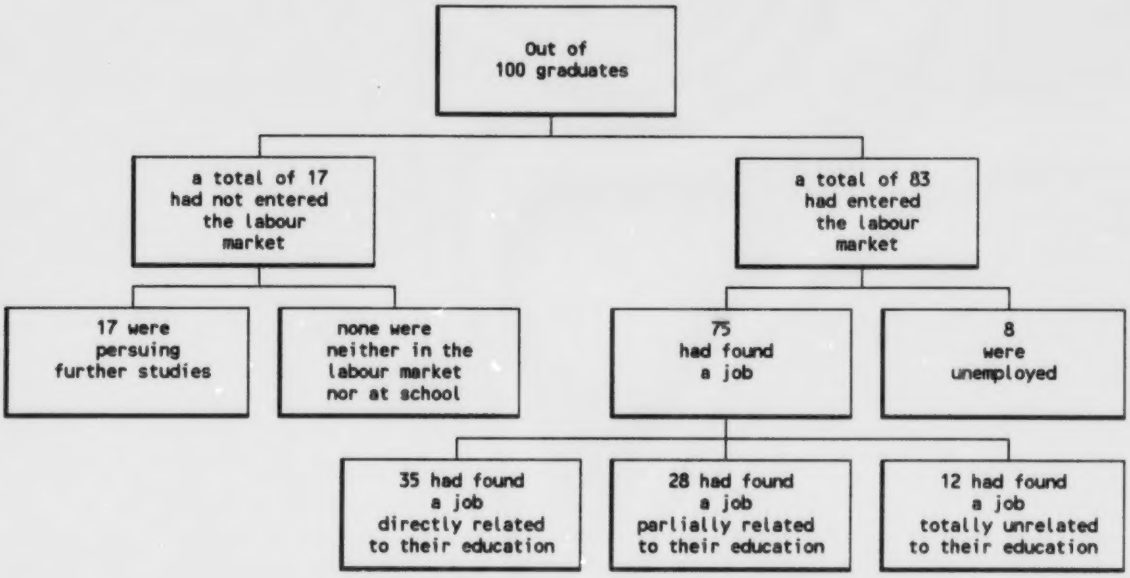
Over the coming years, the forecast requirement for these professionals indicates that a slight tightening of the market can be expected. The market should therefore continue to offer slightly lower than average job opportunities.

GRAPHIC AND AUDIOVISUAL ARTS

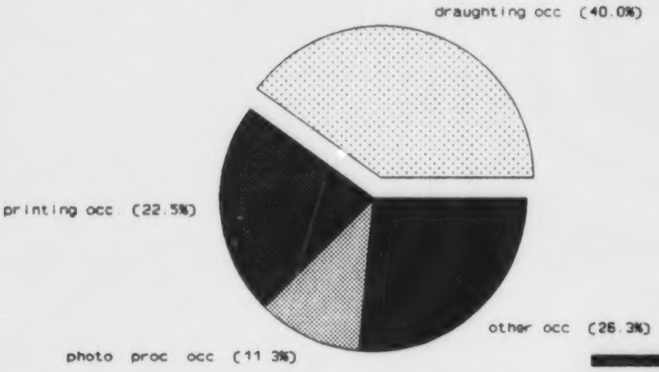
ARTS

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
17 were persuing further studies
none were neither in the labour market nor at school
75 had found a job
8 were unemployed
35 had found a job directly related to their education
28 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	190	1.3	---
1985/90	150	1.1	1.0
1990/95	130	1.0	0.4
1995/2000	135	1.0	0.6

ARTS

GRAPHIC
AND AUDIOVISUAL ARTS
VOCATIONAL COLLEGE DIPLOMA

This group of disciplines includes specialties in photography, graphics and printing. Graphics programs are offered in the Montreal, Quebec City, Lower North Shore and Sherbrooke areas, whereas printing programs are offered only at Ahuntsic College in Montreal.

Trends and projections

After peaking at around 200 graduates in the mid 1980s, the number of graduates started to drop and stabilized at 140 towards the end of the decade. If it remains at its current level, the number of graduates should experience a slight decrease over the next few years owing to the lower school population at this level.

Occupation after graduation

According to the Relance Survey, 75% of the graphics and audiovisual graduates who had entered the labour force were employed in the year after graduation. While the relation between education and work was generally comparable to the average, it tended to be less direct. The unemployment rate for these graduates was comparable to the average.

Occupational profile

The occupational profile of employed graduates was dominated by the group of designers which represented about 40% of those working. With 22.4% of the jobs, the groups in the printing sector offered a large number of openings. In other respects, photography laboratory technicians constituted the third largest occupational group.

Salary

The average annual salary of the graduates working full time in the year after graduation was $17,500.

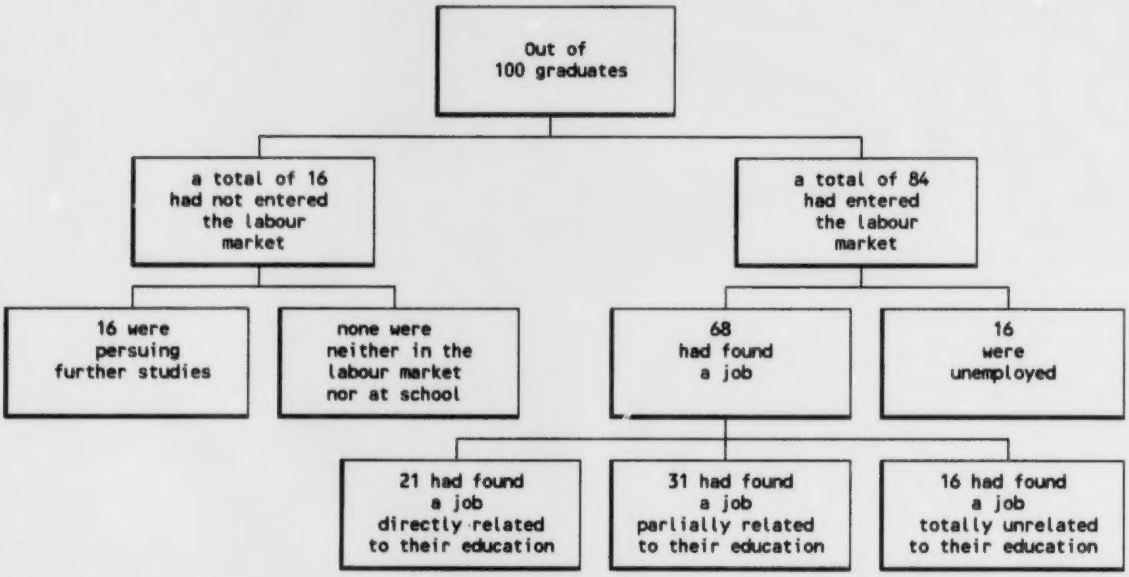
General picture

Over the past few years, graduates in these disciplines faced a labour market with employment opportunities largely comparable to the average. Graphics graduates benefited greatly from the increase in the number of specialized magazines and the expansion of their market into technical and advertising documents which, in addition to beinf in full growth, are increasingly enlisting the services of professional. On the other hand, graduates in the printing sector also benefited from the major technological changes which marked the sector over the past few years, giving rise to the demand for new skills in the area of press operation and photoengraving.

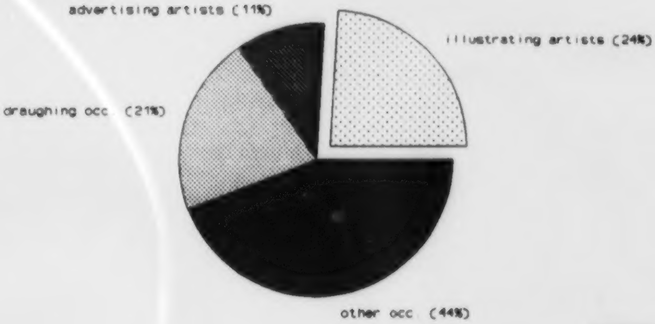
Although they are still being felt, the impact of these changes will tend to diminish as a growth factor. In this context, market entry opportunities could tighten somewhat, slipping slightly below the average of all the occupations associated with the vocational college sector.

APPLIED ARTS — ARTS
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 16 had not entered the labour market
a total of 84 had entered the labour market
16 were persuing further studies
none were neither in the labour market nor at school
68 had found a job
16 were unemployed
21 had found a job directly related to their education
31 had found a job partially related to their education
16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	345	1.6	0.4
1985/90	365	1.5	1.0
1990/95	350	1.4	0.7
1995/2000	350	1.4	0.8

ARTS

APPLIED ARTS
BACHELOR'S DEGREE

This category includes graduates who studied drafting, graphic arts, design, photography, fashion, interior decoration and other applied arts. There is such a wide variety of disciplines that it is impossible to list here all the different programs offered by the various universities. We can, however, mention the industrial design program offered by the University of Montréal, the visual arts programs offered by the different campuses of the University of Quebec and by Concordia, and the photography program at McGill.

Trends and projections

After a slight rise in popularity in the late 1970s, applied arts have since maintained a more or less constant appeal for students. The number of graduates in relation to graduates with bachelor's degrees in other disciplines rose from 0.5% in 1977 to 1.7% in 1984 and has remained at about 1.5% since then. Over the next 10 years, the number of graduates in these disciplines should be approximately 400 annually, if this percentage remains the same.

Occupation after graduation

The labour market performance of these graduates is unusual in comparison with that of graduates in other fields. While they enter the labour market as easily as other graduates, both in terms of the proportion of graduates employed two years after graduation and the link between education and job, a high percentage of these graduates surveyed in 1988 were unemployed. This reflects the greater labour market attachment of these graduates, few of whom had decided to continue their education.

Occupational profile

Occupations pursued by these graduates were predominantly in the artistic field, mainly in the groups of illustrators and commercial artists (25%) and draftsmen and interior decorators (10%). The group of technical drawers was also strongly represented among the occupations chosen by these graduates (20%). Besides drawers of architectural plans and mechanical drawings, the last-mentioned group includes cartographer-drawers and illustrators of technical publications.

General picture

Unfortunately, we were unable to gather statistics on the salaries earned by these graduates. Available information does indicate, however, that they are in a moderately favourable labour market position in terms of job opportunities. A high unemployment rate along side an equally high percentage of employed graduates point to high turnover in occupations related to this field of study and resultant temporary layoffs.

During the 1990s, labour market prospects for these graduates should remain favourable, considering the growing popularity of printed advertising, and the importance of technical manuals for new technologies and of the visual and functional presentation of industrial and household objects.

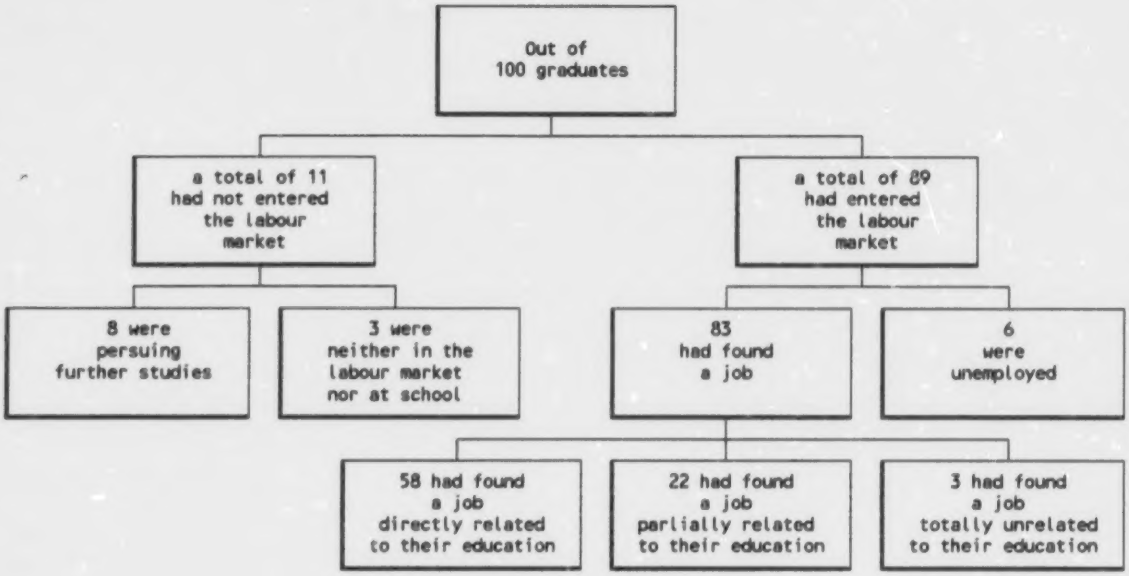
EDUCATION

ELEMENTARY-SECONDARY TEACHER TRAINING

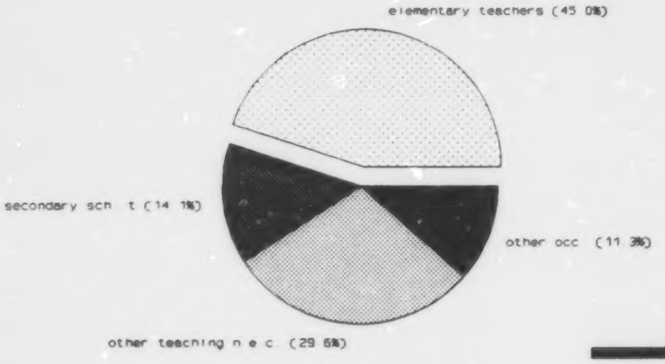
BACHELOR'S DEGREE

EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 11 had not entered the labour market
a total of 89 had entered the labour market
8 were persuing further studies
3 were neither in the labour market nor at school
83 had found a job
6 were unemployed
58 had found a job directly related to their education
22 had found a job parlially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	2065	9.3	0.2
1985/90	1805	7.3	1.0
1990/95	1850	7.2	0.9
1995/2000	1850	7.2	0.9

EDUCATION

ELEMENTARY-SECONDARY TEACHER TRAINING
BACHELOR'S DEGREE

This field of study encompasses all specialized training for teaching in elementary and secondary schools; pre-elementary school teachers are included in the field of study "Teacher Training, Other." Most Quebec universities offer this program at the bachelor's and/or major level. Besides a college diploma or equivalent, there is no specific prerequisite for this program.

Trends and projections

The popularity of this discipline has declined steadily since the late 1970s. Whereas it accounted for 15% of graduates with bachelor's degrees in 1979, the proportion has been no more than 7% in the last few years. All the same, universities continue to provide a strong contingent of graduates each year. A large number of these graduates, however, are teachers who had gone back to university for professional development, as attested by the appreciably higher average age compared with other disciplines. If the trends of the last few years continue, an average of 1,850 students will graduate in this field of study each year in the 1990s.

Occupation after graduation

A percentage of graduates appreciably higher than the average held jobs two years after graduation, and the jobs were more often directly related to their education. This may be explained in part by the fact that a higher percentage of students already had jobs before beginning their degrees. Among graduates who studied full time, the placement rate was closer to the average for graduates with bachelor's degrees, but the percentage of jobs directly related to education was markedly higher than average. Few graduates in this discipline decided to pursue further studies after graduation.

Occupational profile

The vast majority of graduates who had a job two years after graduation were working in teaching (90% of employed graduates). More than 45% were working as kindergarten or elementary school teachers and 15% as secondary school teachers.

Salary

In the 1988 survey of 1986 graduates, respondents working full time reported an average annual salary of $29,200, a salary level 10% higher than the average for graduates with bachelor's degrees.

General picture

The general labour market picture for these graduates seemed decidedly better on average than for graduates with bachelor's degrees in other disciplines. These glowing statistics, however, are attributable in part to the fact that a significant percentage of these graduates already had jobs before finishing their degrees, which they earned by studying part time (professional development). A greater than average proportion would make the same academic choice if the occasion presented itself again.

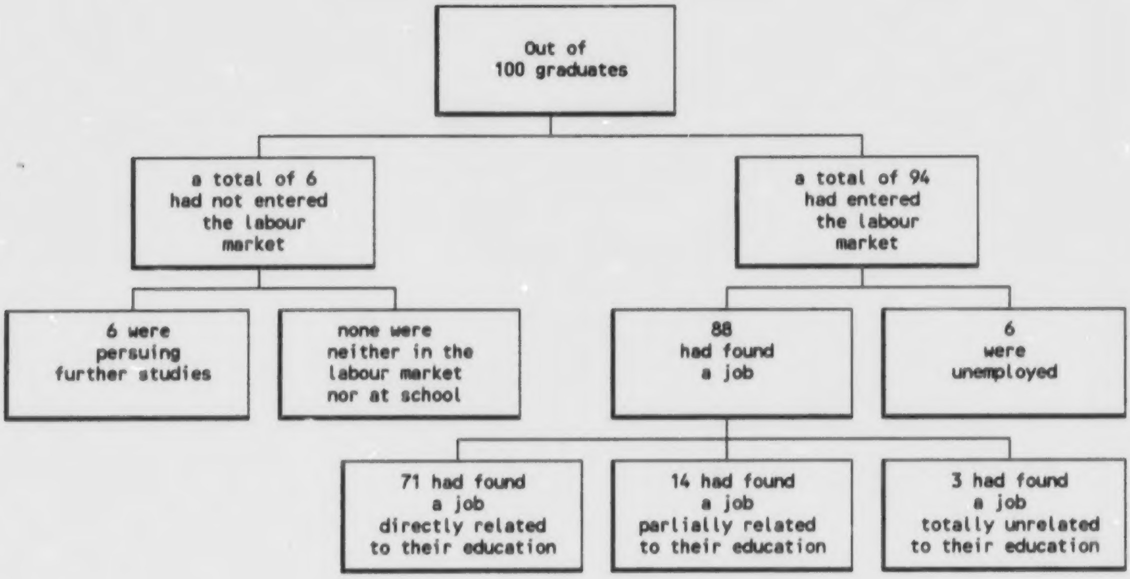
The 1990s could see a reduction in the number of school children, leading to cutbacks in teaching staff, especially in secondary schools. The expansion of the day-care network, however, could provide openings for future graduates. Requirements may increase as we approach the year 2000 because of the aging of the teaching population.

TEACHER TRAINING OTHER

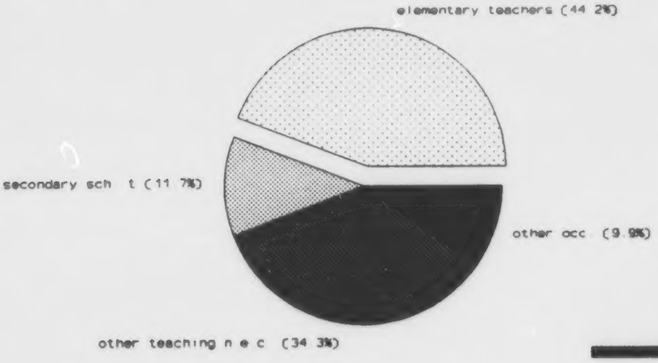
BACHELOR'S DEGREE

EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 6 had not entered the labour market
a total of 94 had entered the labour market
6 were persuing further studies
none were neither in the labour market nor at school
88 had found a job
6 were unemployed
71 had found a job directly related to their education
14 had found a job partially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	955	4.3	0.3
1985/90	770	3.1	1.0
1990/95	800	3.1	0.8
1995/2000	800	3.1	0.9

EDUCATION

TEACHER TRAINING
OTHER
BACHELOR'S DEGREE

This field of study consists mainly in training for teaching at the pre-elementary, postsecondary and other higher education levels. Most Quebec universities offer this program of studies at the undergraduate level (bachelor's degree or major and minor). There is no prerequisite except for a Diploma of Collegial Studies or equivalent.

Trends and projections

After a slight rise in the early 1980s, the popularity of this training remained more or less constant over the second half of the decade. As in the case of elementary and secondary school teacher training, a number of students in this discipline are teachers engaged in professional development. Moreover, many graduates in other disciplines who would like to teach at the secondary or college level enrol in this kind of training. If the trends of the last few years continue, approximately 800 students will graduate in this field of study annually from Quebec institutions over the next 10 years.

Occupation after graduation

A high percentage of graduates in this sector were employed after graduation, and the proportion of jobs directly related to education was among the highest for graduates with bachelor's degrees. This decidedly better than average performance may be explained in part by the fact that a significant number of students already had jobs before beginning their degrees. Few graduates in this discipline decided to pursue further studies.

Occupational profile

The teaching occupations made up the most frequently observed group among employed graduates in this discipline (90% of employed graduates). Kindergarten and primary school teachers were by far the largest group (45%), followed closely by teachers n.e.c. (30%). The latter group includes, among others, educational consultants and adult education teachers.

Salary

In the survey of graduates conducted in 1988, respondents in this field of study reported an average annual salary of $28,100, a salary level approximately 5% higher than the average for respondents with bachelor's degrees.

General picture

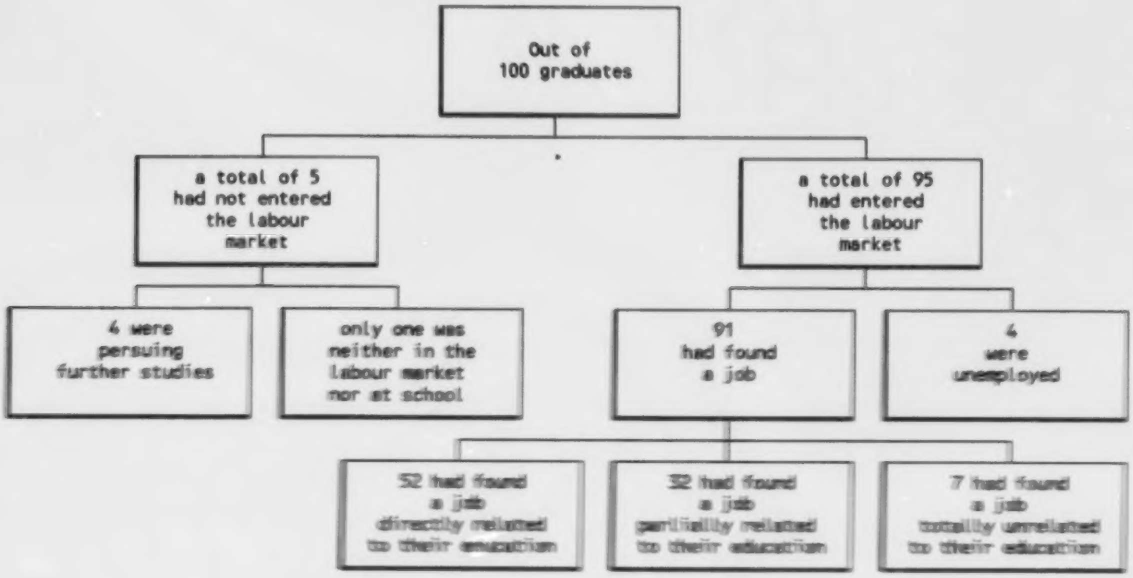
The general labour market picture for these graduates was clearly favourable. However, one must not lose sight of the fact that a not insignificant number of these graduates were teachers engaged in professional development who already had jobs before beginning their degrees. Their satisfaction with their education was very high; 90% would make the same choice.

Over the coming years both positive and negative labour market trends will affect these graduates. On the positive side, replacement requirements will likely rise as we approach the year 2000 and the development of the day-care network and adult vocational training could create openings. On the negative side, we cannot pass over in silence the cutbacks in teaching staff that are expected to accompany the reduction in the number of school children.

TEACHER TRAINING
MASTER'S DEGREE AND DOCTORATE

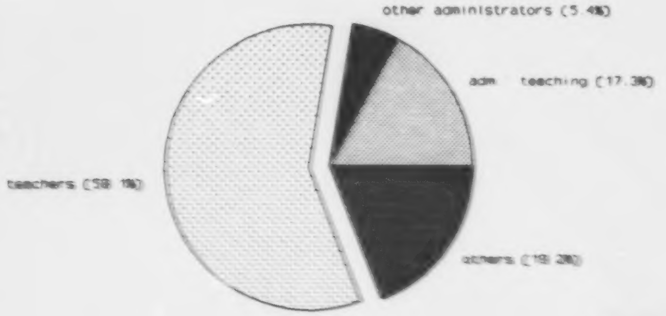
EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 5
had not entered
the labour
market
a total of 95
had entered
the labour
market
4 were
persuing
further studies
only one was
neither in the
labour market
nor at school
91
had found
a job
4
were
unemployed
52 had found
a job
directly related
to their education
32 had found
a job
partially related
to their education
7 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	520	12.6	1.1
1985/90	595	11.7	1.0
1990/95	575	12.1	0.9
1995/2000	530	12.1	1.0

EDUCATION

TEACHER TRAINING
MASTER'S DEGREE AND DOCTORATE

This field of study encompasses studies at the master's and doctoral levels in the disciplines of education, comparative education, guidance counselling and educational administration.

Trends and projections

Except in 1986, the number of graduates in this field of study has grown at the same rate as that of graduates with master's degrees and doctorates as a whole. If this trend continues over the coming years, less favourable demographic pressures will bring the average number of degrees granted annually to approximately 530 by the end of the 1990s.

Graduates' labour market participation

Like the participation rate of graduates with bachelor's degrees in the teaching disciplines, the labour market participation rate of these graduates was significantly higher than that of graduates in other disciplines at the same university level. The placement rate of graduates who had entered the labour market was also above average, and the link between education and employment was more direct. Nearly 40% of employed graduates, however, held a similar job before starting their degrees.

Occupational profile

Graduates were heavily concentrated in teaching occupations. Elementary and secondary school teachers accounted for no less than 30% of employed graduates. Compared with their colleagues with bachelor's degrees, a higher percentage of these graduates held management positions in the educational sector. Nearly 30% of graduates who were not working in the same kind of position after as before their degrees held such management positions.

Salary

The average annual salary of respondents to the 1988 survey working full time two years after graduation was $40,400. This was slightly higher than the average annual salary ($37,400) of graduates with master's degrees or doctorates as a whole.

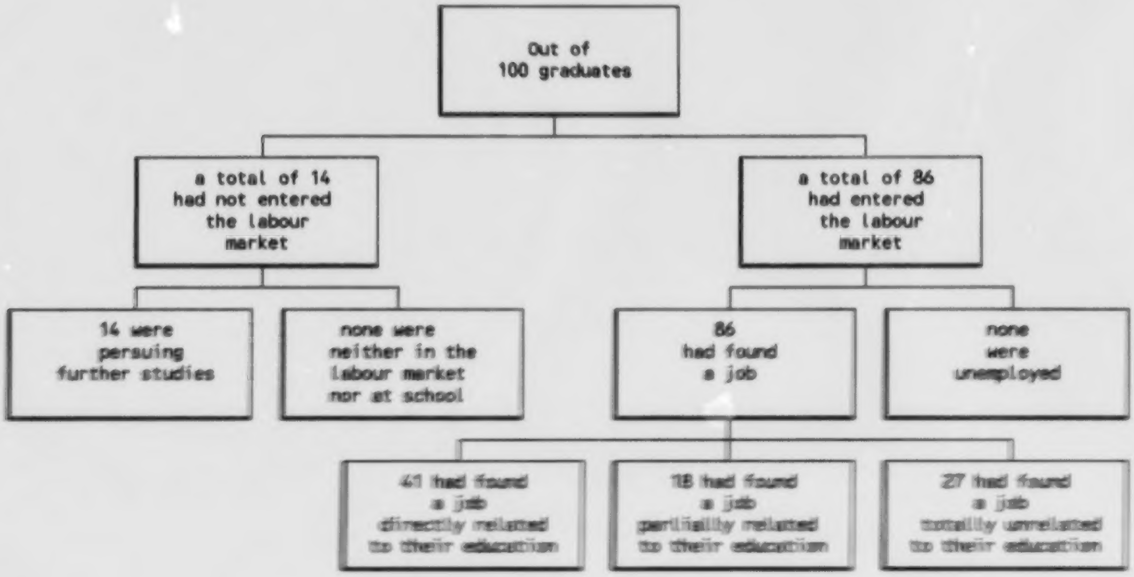
General picture

Over the past number of years, labour market entry possibilities for these graduates have been better than average. A high percentage of these graduates said they were satisfied with their educational choices.

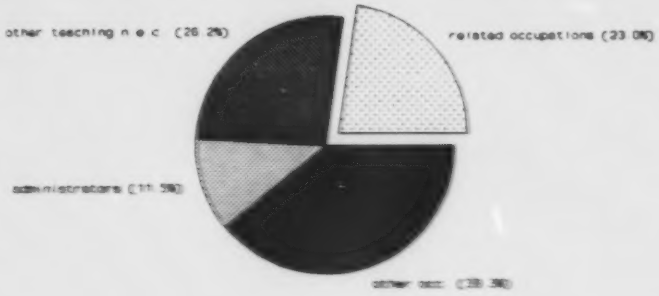
During the 1990s, job opportunities should remain about the same as they have been in the past number of years, despite the expected slower growth in the demand for teachers during the first half of the decade. Generally, this field of study should continue to offer better than average prospects.

NON-CLASSROOM TEACHING EDUCATION
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 14
had not entered
the labour
market
a total of 86
had entered
the labour
market
14 were
persuing
further studies
none were
neither in the
labour market
nor at school
86
had found
a job
none
were
unemployed
41 had found
a job
directly related
to their education
18 had found
a job
partially related
to their education
27 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	240	1.1	1.0
1985/90	235	0.9	1.0
1990/95	250	1.0	1.1
1995/2000	250	1.0	1.2

NON-CLASSROOM TEACHING
BACHELOR'S DEGREE

This field of study encompasses several specialized disciplines such as educational and guidance counselling, school adjustment, remedial instruction and psychoeducation. Although not offered by all universities, the various specialties are available in several of them. The reader is referred to the university calendars for information on specific programs. There is generally no prerequisite other than a Diploma of Collegial Studies or equivalent.

Trends and projections

Since the late 1970s the number of graduates has varied from 200 to 300 annually. This number is expected to remain the same throughout the coming decade.

Occupation after graduation

A higher than average percentage of graduates were employed two years after graduation. Moreover, jobs were more closely related to education on average than among graduates with bachelor's degrees as a whole. Only a few graduates decided to pursue further studies.

Occupational profile

Nearly 40% of graduates employed two years after obtaining their degrees held professional positions in the social sciences, mainly as psychologists (23%) and social workers (10%). Teaching also provided openings, teaching of exceptional children accounting for 10% of positions.

Salary

In the 1988 survey of graduates, the salary ($19,900) of respondents working full time two years after graduation was 25% below the average for graduates with bachelor's degrees.

General picture

Graduates in this field of study seem to be able to enter the labour market more easily than graduates with bachelor's degrees taken as a whole, and their positions are generally related to their education. At the same time, however, salaries are lower than the average for graduates with equivalent qualifications. Lower salaries and often difficult working conditions are probably two reasons why few of these graduates would make the same academic choice (less than 50%).

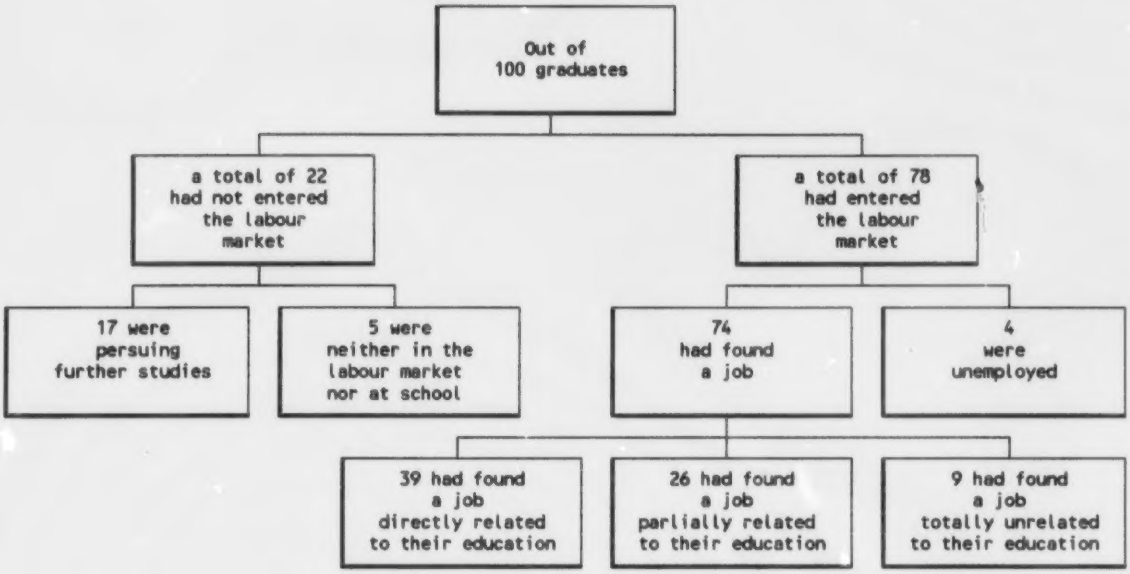
These graduates work mainly in occupational groups concentrated in the public and parapublic sectors. They are therefore vulnerable to the effects of governmental budget decisions. However, factors such as deinstitutionalization and rehabilitation of maladjusted youth should continue to maintain requirements over the coming decade.

PHYSICAL EDUCATION

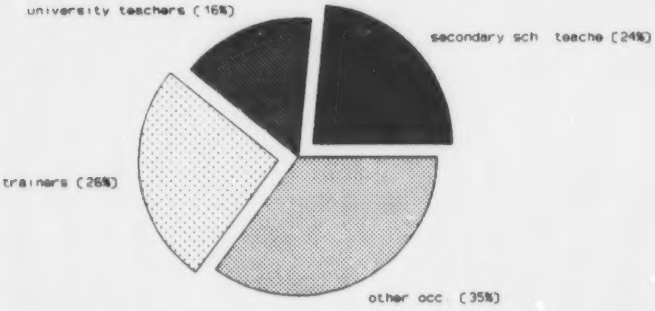
BACHELOR'S DEGREE

EDUCATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 22
had not entered
the labour
market
a total of 78
had entered
the labour
market
17 were
persuing
further studies
5 were
neither in the
labour market
nor at school
74
had found
a job
4
were
unemployed
39 had found
a job
directly related
to their education
26 had found
a job
parlially related
to their education
9 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	645	2.9	---
1985/90	630	2.5	1.0
1990/95	650	2.2	2.0
1995/2000	650	2.5	2.1

PHYSICAL EDUCATION
BACHELOR'S DEGREE

This field of study encompasses the disciplines of physical activity, leisure activities and recreology. Most universities offer an undergraduate program in physical activity, but only the University of Quebec at Trois-Rivières and Concordia offer a program in leisure activities and recreology. Admission requirements vary from university to university, but biology, physics, chemistry and mathematics are generally prerequisites.

Trends and projections

The popularity of this field of study has remained constant over time since the late 1970s, while the different universities have on average granted between 2% and 3% of their degrees in this field. In the coming decade, an average of 650 graduates is expected annually, if the trends of the past few years continue.

Occupation after graduation

Access to the labour market for these graduates was slightly better than for graduates with bachelor's degrees taken as a whole. According to the 1988 survey of graduates, approximately 75% of these graduates were employed two years after graduation. In 65% of cases, respondents' jobs were at least partially related to their education. Because many jobs were available, fewer graduates than the average decided to pursue further studies.

Occupational profile

Graduates in these disciplines found jobs most frequently as secondary school teachers (45% of employed graduates). A not insignificant number (25%) worked as trainers.

Salary

In the 1988 survey of graduates, the average annual salary of respondents in these disciplines was $24,700. This salary level was slightly below the average for all graduates working full time, which was $26,600.

General picture

The labour market position of these graduates seems generally favourable, while placement results are slightly better than for graduates with bachelor's degrees taken as a whole. Approximately 73% would make the same academic choice if the occasion presented itself again, indicating a higher than average level of satisfaction.

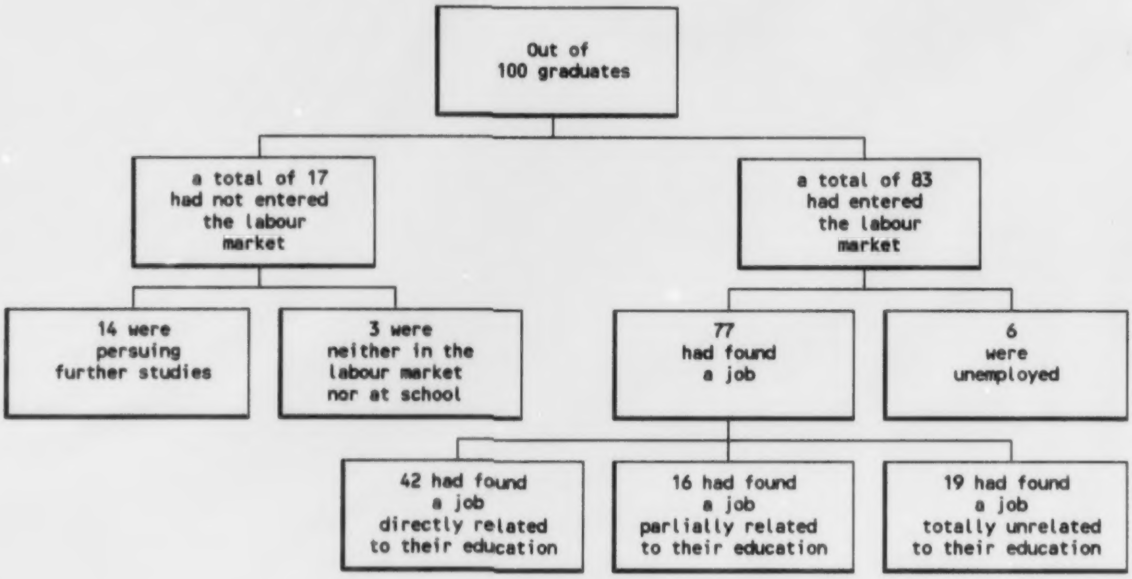
During the 1990s, the continued growth of popular leisure activities, especially training centres and health clubs, should mean that the labour market will continue to provide opportunities for these graduates.

EDUCATIONAL AND GUIDANCE SERVICES

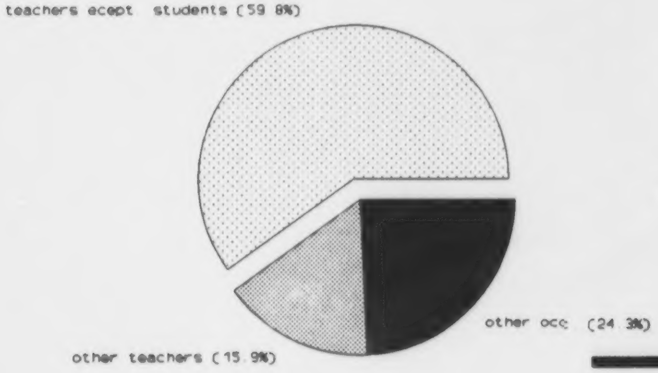
EDUCATION

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 17
had not entered
the labour
market
a total of 83
had entered
the labour
market
14 were
persuing
further studies
3 were
neither in the
labour market
nor at school
77
had found
a job
6
were
unemployed
42 had found
a job
directly related
to their education
16 had found
a job
parlially related
to their education
19 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	640	4.3	0.8
1985/90	520	3.6	1.0
1990/95	450	3.6	1.0
1995/2000	470	3.6	1.0

EDUCATIONAL AND GUIDANCE SERVICES
VOCATIONAL COLLEGE DIPLOMA

All the regions except the Outaouais and the Montérégie offer a teaching program in special education technology.

Trends and projections

The number of graduates in this discipline dropped from 4.3 to 3.6% of the vocational college graduates in the second half of the 1980s.

Occupation after graduation

A slightly higher than average proportion of graduates had found a job after completing their studies. At the same time, the unemployment rate for these graduates was just under that for college graduates taken as a whole. A large number of the jobs obtained were directly related to education.

Occupational profile

In relation to university graduates in non-classroom teaching, the occupational profile of the college graduates was much more concentrated in the teaching groups, which comprised at least 75% of the positions held. Teachers of exceptional children alone accounted for 60% of the jobs obtained and daycare workers for 10%. A larger proportion of these jobs was in social organizations rather than schools. As for the other vocational technologies at the college level, the rest of the employed graduates were in a number of other less specialized groups associated primarily with office work and sales.

Salary

The average salary earned by respondents to the 1988 Relance Survey who were working full time one year after graduation was slightly lower than the average for the vocational college graduates taken as a whole, i.e. $15,200 annually compared to $17,800.

General picture

Given the high placement rate in occupations related to education, graduates in this field of training faced a clearly more favourable market than the average of the other college disciplines. It should be noted, however, that nearly 50% of the jobs held by these graduates were part time and that at least 45% of them were temporary, which explains the lower than average salary level.

Over the coming years, the drop in the school population should have some effect on the requirement growth for professionals working in the formal education sector. At the same time, the expansion of the daycare network and the less institutionalized approach towards groups with behavioural problems should continue to foster requirement growth in the social services sectors.

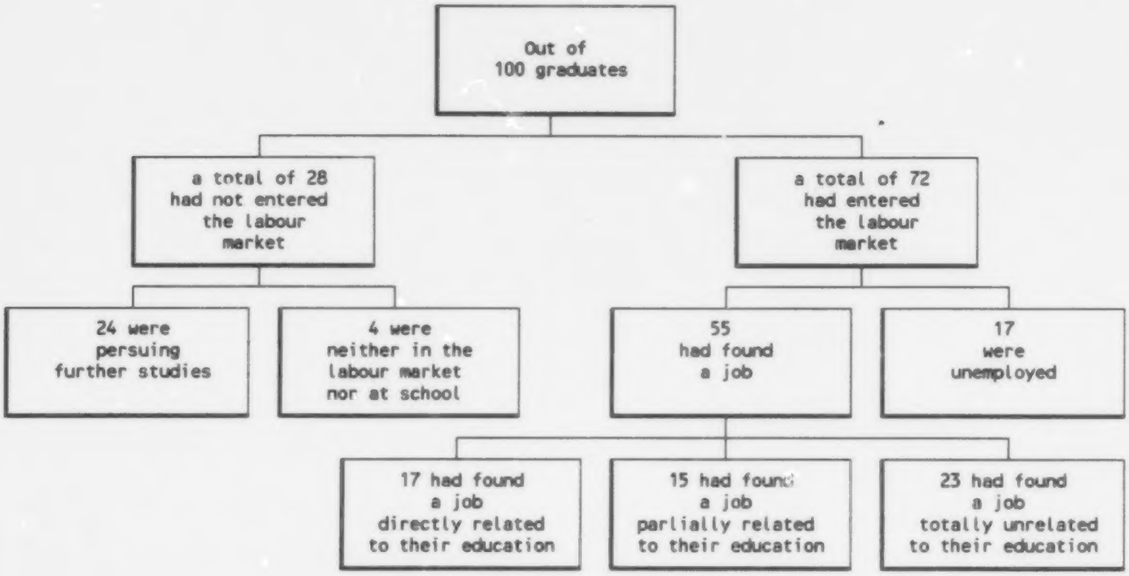
COMMERCE, MANAGEMENT AND ADMINISTRATION

COMMERCE

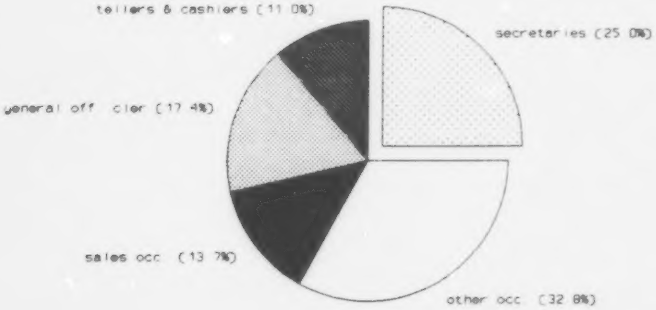
COMMERCE, MANAGEMENT AND ADMINISTRATION

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 28 had not entered the labour market
a total of 72 had entered the labour market
24 were persuing further studies
4 were neither in the labour market nor at school
55 had found a job
17 were unemployed
17 had found a job directly related to their education
15 had found a job partially related to their education
23 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	3330	11.3	0.3
1985/90	1110	9.6	1.0
1990/95	1105	11.7	1.0
1995/2000	1155	11.7	0.9

COMMERCE, MANAGEMENT AND ADMINISTRATION

COMMERCE

SECONDARY VOCATIONAL

This group of disciplines includes specialties related to sales and clerical work with the exception of secretarial studies.

Trends and projections

The popularity of these disciplines has closely followed the overall pattern of the secondary vocational sector, with the number of graduates dropping by almost half over the last decade. Yet, nearly 10% of all young people who enrol in the secondary vocational enter these programs.

Occupation after graduation

According to the Relance Survey, nearly 25% of the graduates in these disciplines chose to continue their studies immediately after graduation, representing a proportion well above the average. Graduates who entered the labour market experienced a success quite similar to the average in terms of placement since eight out of ten were employed during the first year. One worker in five, however, held a part-time job.

Occupational profile

Employed graduates were working in at least 50 occupational categories. The various groups of office employees accounted for about 60% of the jobs obtained. Among the most common jobs, were those of secretary (25%) and cashier (11%). The groups related to sales and service workers constituted the second largest categories with 14% and 11% of the jobs.

Salary

The average salary of graduates working full time was $11,100 one year after graduation.

General picture

Despite the bright employment outlook for office jobs, the jobs obtained did not appear to correspond to graduates' expectations. In fact, although 60% of graduates were working in this type of job, more than 40%, of these graduates reported that their tasks were not related to their education. This dissatisfaction was apparent in the fact that a number of graduates chose to pursue their studies further.

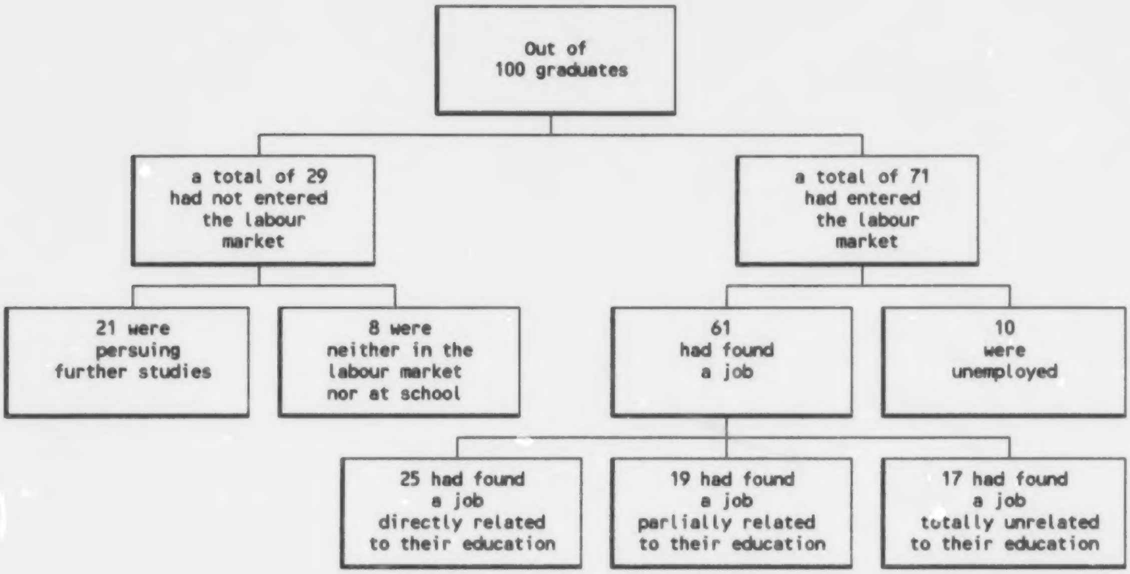
Employment conditions are expected to remain more or less the same over the next few years. Because of their number and the turnover rate associated with them, office jobs will continue to provide excellent employment opportunities. Candidates will nonetheless have to have a practical knowledge of increasingly ubiquitous computer equipment.

TABLE SERVICE

COMMERCE, MANAGEMENT AND ADMINISTRATION

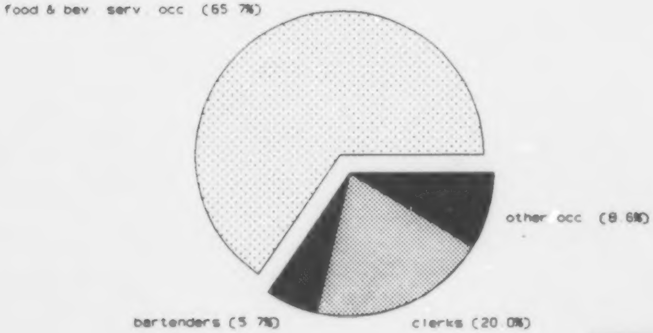
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 29 had not entered the labour market
a total of 71 had entered the labour market
21 were persuing further studies
8 were neither in the labour market nor at school
61 had found a job
10 were unemployed
25 had found a job directly related to their education
19 had found a job partially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	220	0.7	0.2
1985/90	70	0.6	1.0
1990/95	40	0.4	2.3
1995/2000	40	0.4	2.2

TABLE SERVICE

SECONDARY VOCATIONAL

This field of studies covers the main duties involved in proper food serving, including wine serving.

Trends and projections

Enrolment in these disciplines has more or less followed the same pattern as that of the secondary vocational sector taken as a whole, with the number of graduates dropping by nearly 70% during the 1980s.

Occupation after graduation

According to the 1988 Relance Survey, three out five graduates were employed one year after graduation. Given that an above-average proportion had decided to continue their studies, this employment rate translated into a placement rate of about 85%, which compares quite favourably to that of all the secondary vocational graduates. Seven out of ten graduates who were employed were working in a job that was in some way related to their training. However, more than one-third of these jobs were part time.

Occupational profile

Naturally, most of the related jobs were those of waiter and waitress. Other occupational categories open to these graduates in the food sector were those of barmen/women, receptionists and cashiers.

General picture

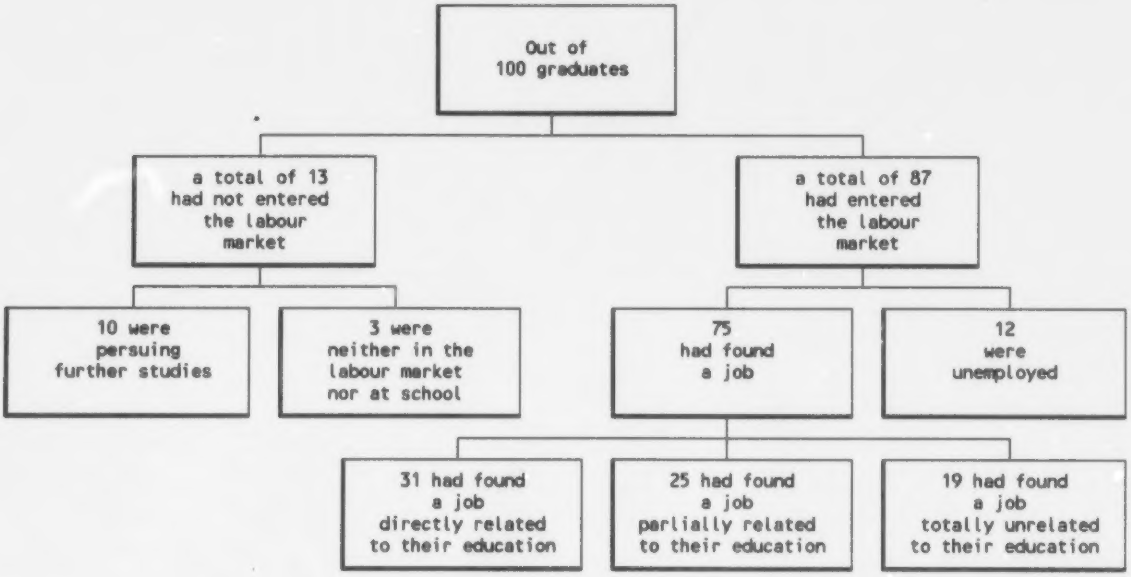
These graduates are enjoying a generally favourable labour market. Factors such as the growth of the restaurant sector, particularly of family restaurants, and high personnel turnover mean that numerous jobs are available throughout the year. Business hours and peak activity times during the day favour part-time work as well as evening and weekend work.

SECRETARIAL STUDIES AND DATA PROCESSING

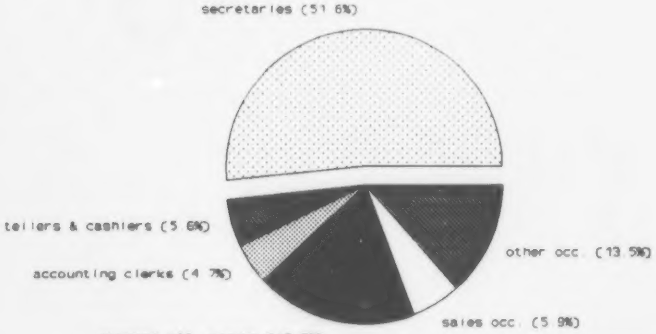
SECONDARY VOCATIONAL

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 13
had not entered
the labour
market
a total of 87
had entered
the labour
market
10 were
persuing
further studies
3 were
neither in the
labour market
nor at school
75
had found
a job
12
were
unemployed
31 had found
a job
directly related
to their education
25 had found
a job
perlially related
to their education
19 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	5745	19.4	0.2
1985/90	1665	14.4	1.0
1990/95	1650	17.5	1.0
1995/2000	1725	17.5	0.9

This field of study includes the various specialties associated with secretarial studies and the operation of computer equipment.

Trends and projections

Despite the considerable drop in their enrolment during the 1980s, these disciplines are still the most popular with young people who enter secondary vocational programs. Nearly 15% of the secondary vocational diplomas awarded each year are in these disciplines.

Occupation after graduation

These graduates showed a high labour force participation one year after graduation. Nonetheless, a larger proportion of computer science graduates pursued their studies further. Nearly nine out of ten graduates in the labour force were employed one year after graduation. The unemployment rate of computer science graduates was therefore very similar to the average rate for secondary vocational graduates taken as a whole, i.e. 15%. According to those employed three quarters of the jobs were at least partially related to education. If the frequency of part-time work was average, temporary jobs were slightly more frequent (more than one job in five).

Occupational profile

Although half of the employed graduates were working as secretary-stenographers, the others held jobs in a large variety of occupations. The groups of office employees other than the secretarial group, of which the largest was that of bookkeepers and cashiers, accounted for another 30% of the jobs. Jobs in sales and services were also open to these graduates.

Salary

The average salary of these graduates when they were working full time was comparable to that of secondary vocational graduates taken as a whole, i.e. $13,500 the first year.

General picture

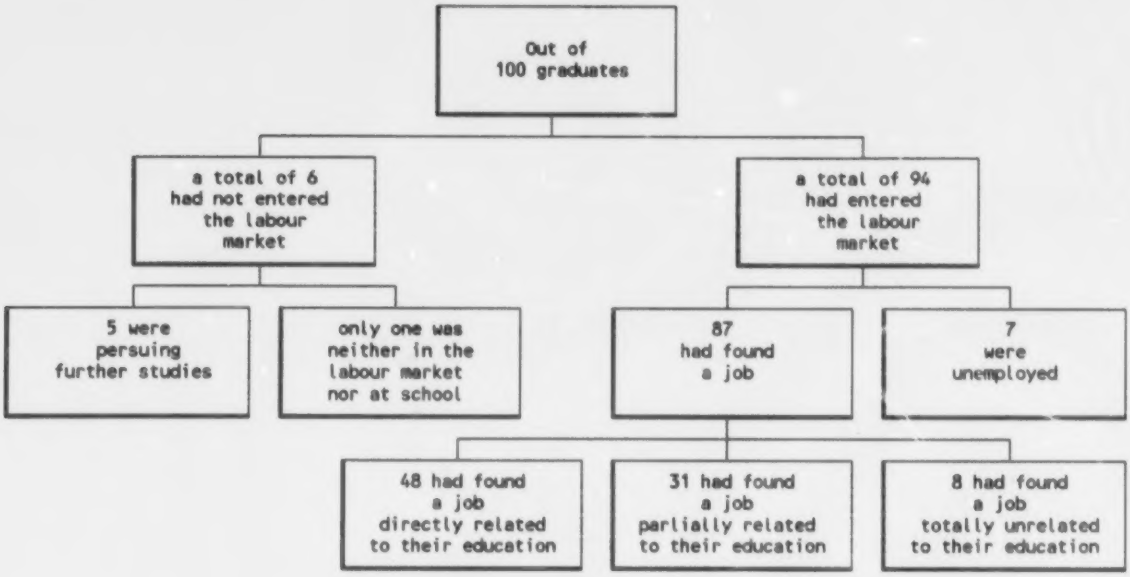
Secretarial training allows for occupational mobility within numerous office employee groups, which makes it easier for these graduates to enter the labour market. In this respect, the employment outlook for these graduates is brighter than in a number of smaller markets. The job opportunities for secretaries, the occupation that is specifically sought by these graduates, are subject to strong competition from college-level graduates in secretarial studies who enter the market in proportionally higher numbers.

Over the next few years, this training is expected to continue providing a great deal of job openings given the opportunities for employment growth and the large number of office jobs.

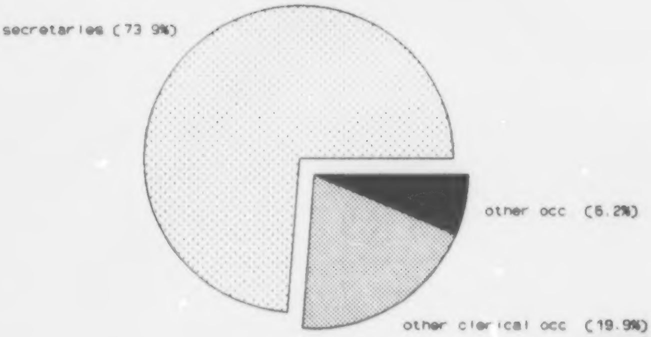
SECRETARIAL TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 6 had not entered the labour market
a total of 94 had entered the labour market
5 were persuing further studies
only one was neither in the labour market nor at school
87 had found a job
7 were unemployed
48 had found a job directly related to their education
31 had found a job partially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1400	9.5	1.2
1985/90	1345	9.4	1.0
1990/95	1215	9.6	1.0
1995/2000	1265	9.6	0.9

COMMERCE, MANAGEMENT AND ADMINISTRATION

SECRETARIAL TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

Training in this field is available in almost all Quebec regions.

Trends and projections

The growth in the number of graduates in this discipline has been very similar to the increase in the number of vocational college graduates. This is one of the most popular disciplines, accounting on average for 10% of the vocational college students who graduate each year.

Occupation after graduation

With a labour market participation rate of approximately 94%, graduates in this discipline are among the most active. This high participation rate is accompanied by a high placement rate since more than 90% of the employed graduates held a job one year after graduation. The jobs obtained were also more frequently and more directly related to education than those obtained by their colleagues in other college disciplines. The jobs were full time and permanent for the most part.

Occupational profile

The occupational profile of employed graduates one year after graduation is a good reflection of the close relation between education and work. Nearly 75% of the graduates were working as secretaries and another 20% performed various office tasks.

Salary

An average annual income of $14,500 reported by graduates who were working full time one year after completing their studies was 20% lower than the average income of college graduates taken as a whole.

General picture

The placement outlook for jobs directly related to education is one of the best compared to the different training programs at the college level. The rapid growth of office technology has had the effect of eliminating a large number of repetitive tasks and giving rise to more varied tasks requiring a better knowledge of work organization. As secretarial tasks have become more complex, employers' requirements have tended to grow. This has had the effect of favouring secretarial candidates to the detriment of those who are more oriented towards typing or journal entry tasks.

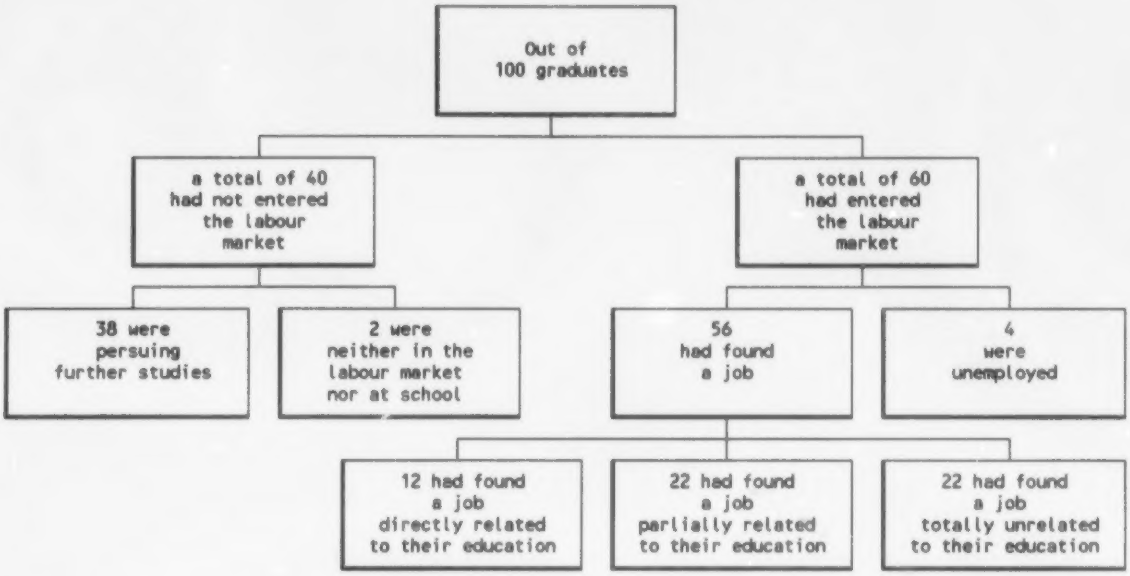
Over the next decade, employment prospects for these graduates should remain better than average even if the demand grows at a slightly slower rate than in past years.

BUSINESS ADMINISTRATION

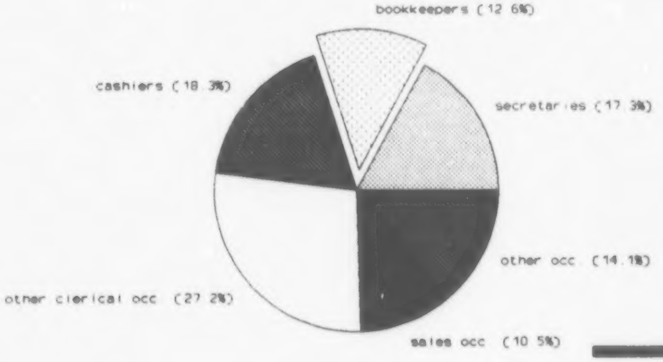
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 40 had not entered the labour market
a total of 60 had entered the labour market
38 were persuing further studies
2 were neither in the labour market nor at school
56 had found a job
4 were unemployed
12 had found a job directly related to their education
22 had found a job partially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	330	2.1	0.8
1985/90	480	3.2	1.0
1990/95	430	3.4	1.2
1995/2000	445	3.4	1.1

COMMERCE, MANAGEMENT AND ADMINISTRATION

BUSINESS ADMINISTRATION
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses the general business administration and business administration and cooperative movement technologies. These disciplines are offered in most Quebec regions except Abitibi, North Shore and Estrie.

Trends and projections

The number of graduates in these disciplines has remained more or less constant over the past decade. Given the expected drop in the college population over the next ten years, the number of graduates could decrease by about 10% if this discipline maintains its relative importance.

Occupation after graduation

According to the 1988 Relance Survey conducted by the Department of Education, a much higher proportion of respondents in this field chose to continue their studies one year after graduation than the average of vocational college graduates taken as a whole. This situation contrasted with the encouraging placement results noted among graduates who decided to enter the labour market. In fact, the placement rate for these graduates reached 93% compared to an average of 80% for the other graduates. However, only 60% of employed graduates considered their duties to be at least partially related to their education, a lower proportion than the 80% for their colleagues in other disciplines.

Occupational profile

The occupational profile of employed graduates one year after completing their degree clearly shows that clerical jobs provided the means of entry into the labour market. Middle management positions were to all intents and purposes absent from their occupational profile. Thus, 75% of the jobs obtained were in this category and the main groups represented were those of cashiers, bookkeepers and office employees.

Salary

The average salary of respondents to the survey was $14,500 annually.

General picture

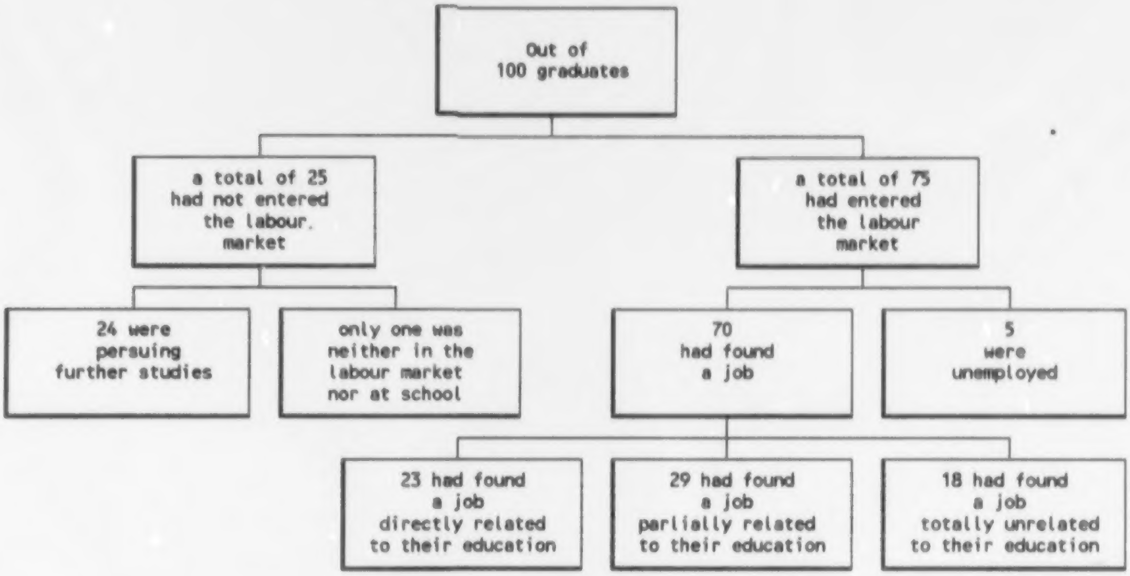
The employment outlook is generally excellent for those graduates who are willing to acquire experience in the labour market in jobs that do not immediately present management challenges. The high proportion of those who decide to continue their studies clearly shows that a number of these graduates had higher short-term expectations. In this respect, the placement results of the university graduates indicate that middle management positions are more easily accessible to graduates with bachelor's degrees.

Over the next few years, the number of employment opportunities for these graduates will continue to be higher than average but under the same conditions as those that prevailed over the past few years. In the medium and long terms, middle management positions will remain accessible to those who have proved their abilities.

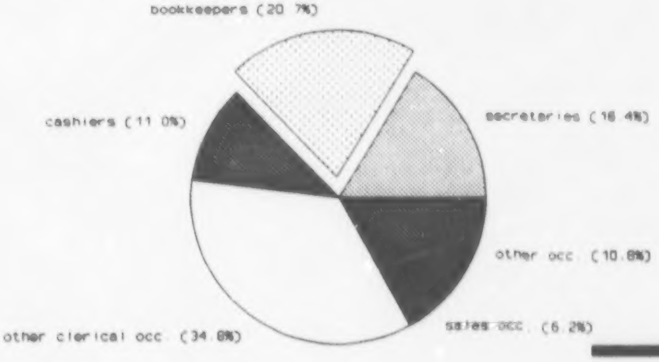
FINANCIAL MANAGEMENT
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 25 had not entered the labour market
a total of 75 had entered the labour market
24 were persuing further studies
only one was neither in the labour market nor at school
70 had found a job
5 were unemployed
23 had found a job directly related to their education
29 had found a job partially related to their education
18 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1500	9.9	0.5
1985/90	1370	9.5	1.0
1990/95	1230	9.7	1.3
1995/2000	1280	9.7	1.1

FINANCIAL MANAGEMENT

VOCATIONAL COLLEGE DIPLOMA

This study program is offered by a large number of institutions and is available in each of the 12 Quebec regions.

Trends and projections

With nearly 10% of the vocational sector graduates at the college level, this field of training is one of the most popular. Its relative importance has remained more or less constant during the 1980s, while the number of graduates grew at the same pace as that of the whole. The declining population in the age category closest to the college population could cause the number of graduates to fall by 10% towards the end of the 1990s.

Occupation after graduation

As for general administration technology, the placement rate for graduates who entered the labour market at the end of their studies was 93%, a higher than average level. The relation between education and work, although weaker than the average, was stronger than that noted in the marketing or general administration specialties. As in the other college-level business administration disciplines, a sizeable proportion of graduates decided to continue their studies after obtaining their diploma.

Occupational profile

More than 80% of graduates who were employed one year after graduation were working as clerks. The main occupational groups were those of bookkeepers and cashiers, accounting for 30% of the jobs obtained. Middle management positions were held by few graduates and did not constitute entry jobs but rather positions accessible in the medium or long term in the course of a career.

Salary

The average annual salary of respondents to the 1988 Relance Survey who were working full time was $14,200, a level more or less comparable to the average of graduates in business administration disciplines at the college level.

General picture

These graduates have an excellent chance of entering the labour market upon completion of their studies. Candidates must however accept clerical positions initially and then aspire to positions within the company that carry greater responsibility. Faced with this situation, an appreciable number of graduates opt to continue their studies.

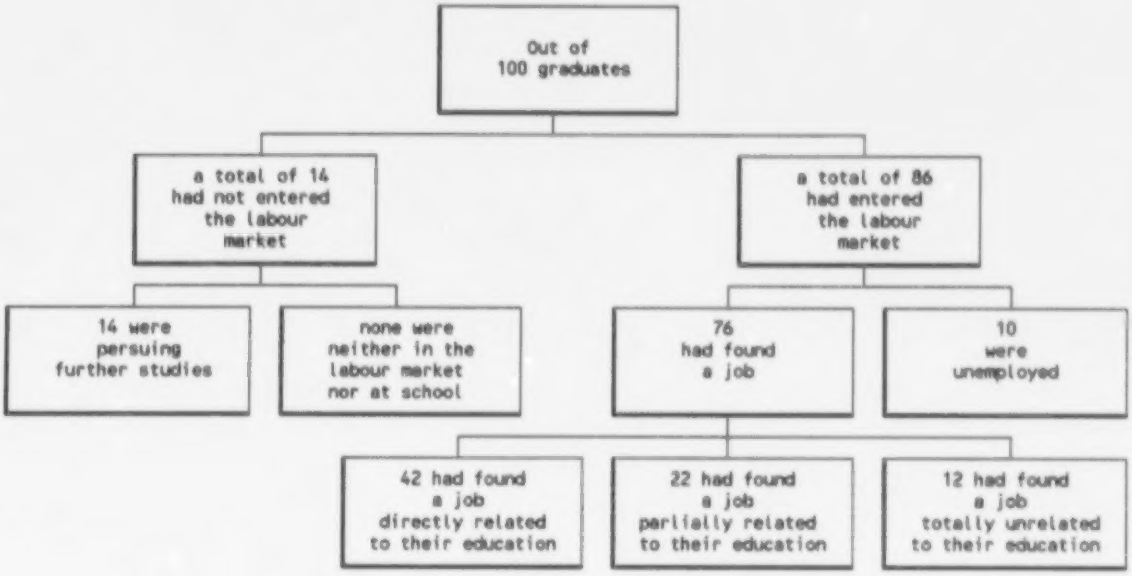
Over the next few years, the labour market will continue to offer good employment opportunities. As in the recent past, entry-level jobs will increasingly include clerical duties, but the career outlook for middle management positions will remain good over the longer term.

INSTITUTIONAL MANAGEMENT

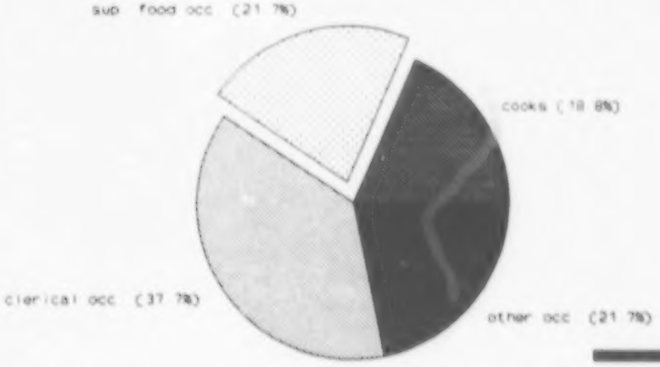
VOCATIONAL COLLEGE DIPLOMA

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 14 had not entered the labour market
a total of 86 had entered the labour market
14 were persuing further studies
none were neither in the labour market nor at school
76 had found a job
10 were unemployed
42 had found a job directly related to their education
22 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	80	0.5	0.9
1985/90	110	0.8	1.0
1990/95	100	0.8	1.2
1995/2000	105	0.8	1.2

COMMERCE, MANAGEMENT AND ADMINISTRATION

INSTITUTIONAL MANAGEMENT

VOCATIONAL COLLEGE DIPLOMA

This program encompasses the hotel business and food production and administration specialties. The Institut de tourisme et d'hôtellerie du Québec (ITHQ) offers programs of study in both specialties while Lasalle College offers training in the hotel business. These two institutions are located in Montreal.

Trends and projections

About 100 students have graduated annually over the past few years. The volume of graduates is expected to remain at this level during the next decade.

Occupation after graduation

Compared to graduates in general business administration, financial management and marketing technologies, a large proportion of these graduates entered the labour market after completing their studies. Despite an unemployment rate which was higher than the average for graduates in any of the other management disciplines taken as a whole, an appreciable number of graduates were employed and, for the most part, held jobs that were at least partially related to their education. Note also that the large majority of the jobs obtained were permanent and full time.

Occupational profile

The three occupational groups of food-services supervisors, chefs and cooks as well as receptionists and telephone operators accounted for an almost equal share of 60% of the positions held by graduates in institutional management. The group of sales representatives also provided a significant number of openings since more than 10% of 1987 graduates were so employed according to the 1988 Relance Survey. This occupational profile differs from that of other business administration disciplines in that the clerical groups are rarely encountered.

Salary

The average annual salary of respondents to the survey who were working full time was $14,900.

General picture

Over the last decade, graduates in institutional management benefited from the extensive development of the tourist infrastructures and the growth of the food service sector. For these reasons, graduates in institutional management were less adversely affected by the 1981-82 recession than gradates in other college disciplines. Despite the slightly higher than average unemployment rate, job opportunities in education-related occupations remained just above average. Moreover, compared to other management disciplines, this discipline offers distinctly better chances of entering the labour market in the short term.

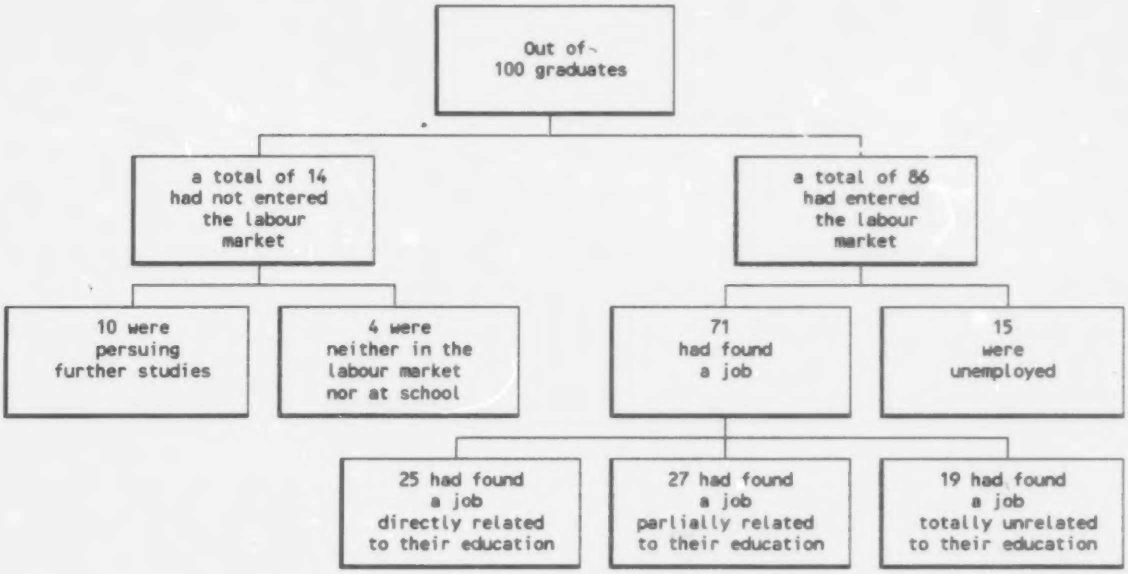
In the coming years, the factors which have sustained the requirement growth over the last few years will continue to exert an influence. Overall, the employment outlook is expected to remain much the same as that of recent years.

OTHER MANAGEMENT SERVICES

COMMERCE, MANAGEMENT AND ADMINISTRATION

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of-
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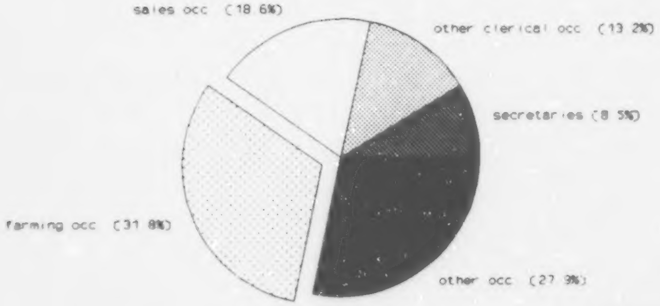
to their education
27 had found
a job
parlially related
to their education
19 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	250	2.6	---
1985/90	280	1.9	---
1990/95	210	1.7	---
1995/2000	220	1.7	---

OTHER MANAGEMENT SERVICES
VOCATIONAL COLLEGE DIPLOMA

This field of training encompasses disciplines related to farm management and operation, personnel management, transportation management and industrial management.

Trends and projections

Over the last decade the number of graduates in this field of training has increased more slowly than for all the other vocational college disciplines. This drop in popularity can be mainly attributed to disciplines linked to the operation of farming enterprises whose graduates have stabilized in number. During the next few years, rather unfavourable demographic pressures should translate into a slight decline in the number of graduates in this field of study. If the decrease in popularity of the last few years continues, the number of graduates could see a more substantial drop than that indicated by the data given on the preceding page.

Occupation after graduation

One year after completing their studies, graduates in these disciplines entered the labour market in proportionally greater numbers. Nonetheless, they experienced more difficulty in obtaining jobs and their unemployment rate was 11.6% compared to an average of 8.5% for vocational college graduates. The relation between education and work, however, was less direct than average and in this sense could be compared to other management disciplines at the college level.

Occupational profile

The occupational groups of farm labourers provided the most employment opportunities, accounting for 30% of the jobs obtained. With 12% and 8% of the jobs respectively, the occupations of dairy-farm workers and farm labourers were the principal means of entry into the labour market. As in all other management disciplines at the college level, clerical jobs and sales-related jobs also provided a popular means of entry into the labour market.

Salary

The average salary of respondents to the survey who were working full time after completing their studies was $14,800 annually, a slightly lower level than the annual average of $17,700 earned by vocational college graduates taken as a whole.

General picture

As for all other management disciplines at the college level, the entry-level jobs that are immediately accessible to these graduates are primarily jobs with few management responsibilities, i.e. farm workers in the case of farm management graduates and clerks and salespersons for the other disciplines. Nonetheless, there are very real possibilities for promotion in the longer term since management positions are often filled by human resources available within the company. Knowledge acquired through work experience associated with lower-level jobs confers a marked advantage over less qualified candidates.

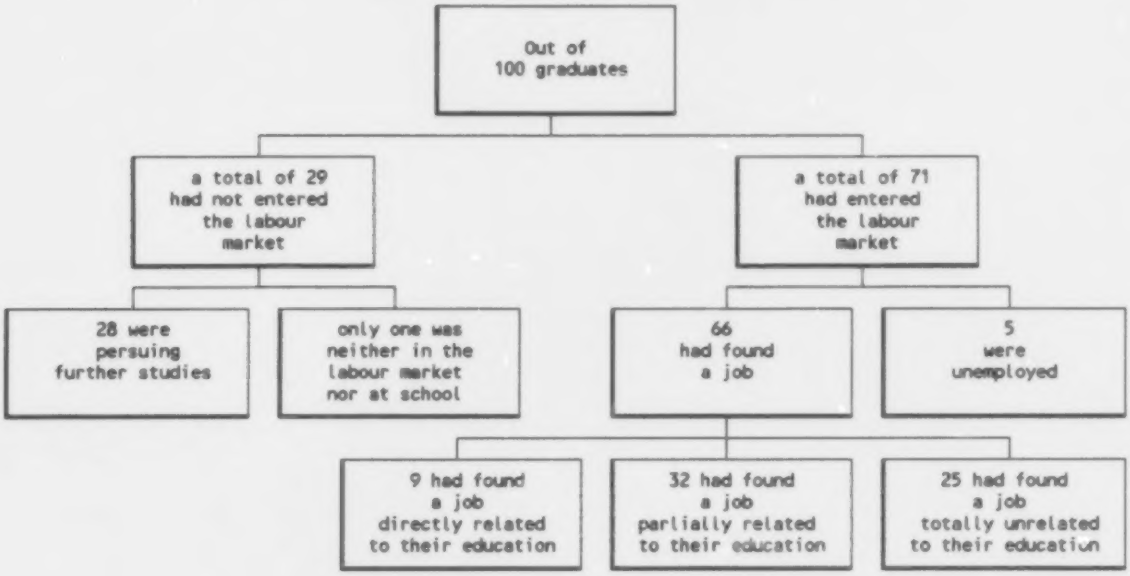
In the coming years, expected growth in labour force supply and demand in the agricultural sector is such that there could be a shortage of farmers. One of the main difficulties which candidates must face, however, is that today they can hardly afford to set up a farming enterprise on their own due to the enormous costs involved.

MARKETING

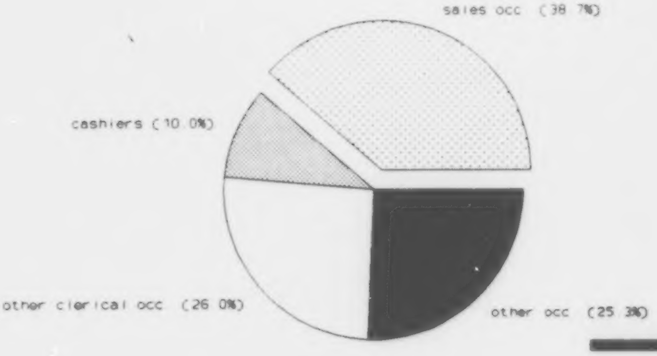
COMMERCE, MANAGEMENT AND ADMINISTRATION

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 29 had not entered the labour market
a total of 71 had entered the labour market
28 were persuing further studies
only one was neither in the labour market nor at school
66 had found a job
5 were unemployed
9 had found a job directly related to their education
32 had found a job parlially related to their education
25 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	290	1.8	---
1985/90	325	2.2	1.0
1990/95	285	2.2	0.5
1995/2000	295	2.2	0.5

MARKETING

VOCATIONAL COLLEGE DIPLOMA

Training in marketing technology is available in almost all Quebec regions, with the exception of the North Shore, Gaspé and Outaouais regions.

Trends and projections

The number of graduates in this discipline has grown at a slightly faster than average rate over the last decade. Its relative importance thus rose from 1.8% in the first half of the 1980s to 2.2% in the second half. Owing to the smaller population of young people, the annual number of graduates should fall by about 10% during the next few years.

Occupation after graduation

As with the general business administration disciplines, a large number of marketing students continued their studies after graduation. This situation has a lot to do with the fact that a clearly lower than average proportion of graduates indicated that their jobs were directly related to their education. In spite of this, the placement of candidates who decided to enter the labour force compared favourably to that of other disciplines at the same level.

Occupational profile

As for the other categories of college-level management graduates, the occupational profile of the graduates who were employed one year after completing their studies was dominated by the groups of clerks and salespersons, which together accounted for at least 80% of the jobs. However, the occupational profile differed in that the salespersons groups were ahead of the clerical groups.

Salary

Of all the college-level management disciplines, graduates specializing in marketing had the highest average salary one year after graduation, with $16,500 annually.

General picture

The labour market offered good employment opportunities for college marketing graduates. The jobs obtained by the graduates, however, fell short of their expectations. As for university marketing graduates, sales jobs provided the most openings. However, while university graduates obtained jobs as sales executives and sales representatives, college graduates found jobs as salespersons and sales clerks.

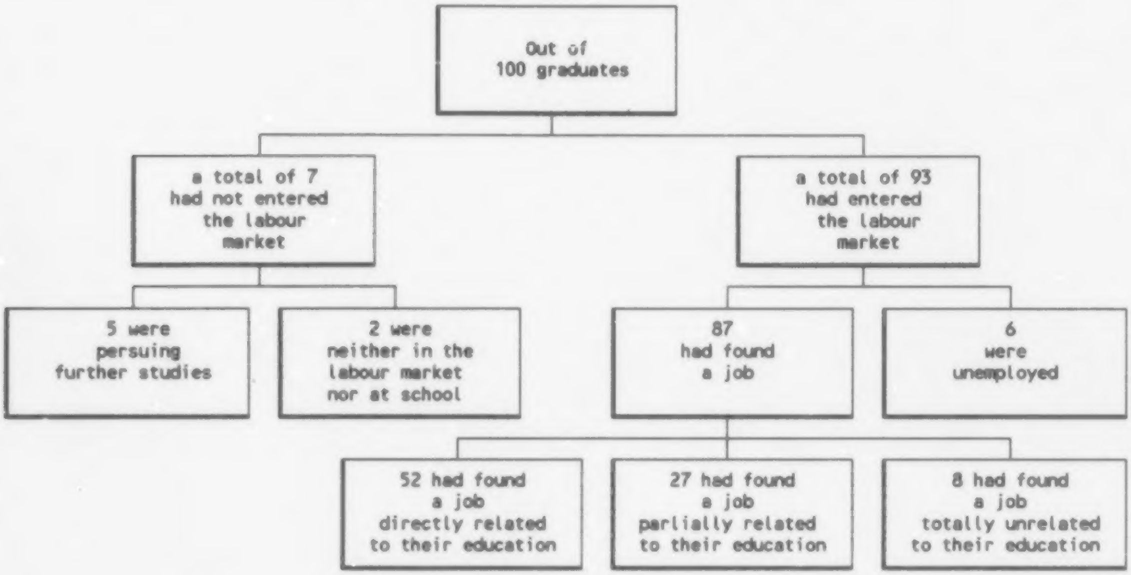
Over the next few years, occupations in sales will continue to offer good employment opportunities. The qualifications required for a large number of these jobs will tend to grow as salespersons become increasingly responsible for planning, customer service and after-sales service.

COMMERCE AND MANAGEMENT

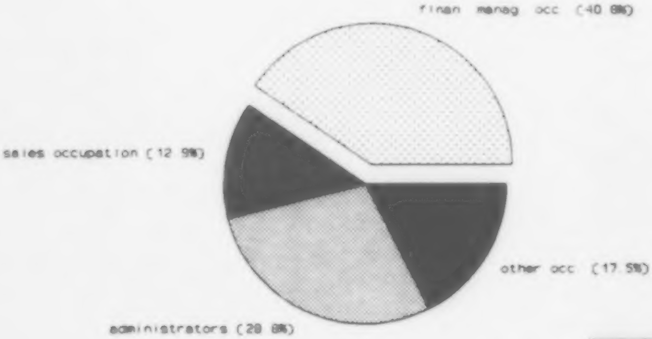
COMMERCE, MANAGEMENT AND ADMINISTRATION

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
5 were persuing further studies
2 were neither in the labour market nor at school
87 had found a job
6 were unemployed
52 had found a job directly related to their education
27 had found a job parlially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	4180	18.9	1.2
1985/90	4871	19.7	1.0
1990/95	5000	19.6	0.9
1995/2000	5075	19.7	0.9

COMMERCE AND MANAGEMENT

BACHELOR'S DEGREE

This broad field of study comprises disciplines such as accounting, finance, personnel management, labour relations, health services administration, public administration and other administrative specialties. Most Quebec universities offer specialized programs in these various disciplines. Prerequisites vary depending on educational institution and discipline, but advanced college mathematics courses are usually required.

Trends and projections

The popularity of the various administrative disciplines has grown steadily over the 1980s. From 13.5% in 1977, the number of graduates in this category as a percentage of all graduates with bachelor's degrees rose to 16% in 1980 and 20% in 1989. In absolute terms, this trend represents a rise of nearly 90% in the number of graduates in administration over the last ten years. If current trends continue, an estimated annual average of 5,000 students will graduate in this field of study over the next ten years.

Occupation after graduation

The vast majority of graduates in administrative disciplines enter the labour market. At the same time, a small percentage of them continue their education immediately after graduation. This high participation rate is coupled with an employment rate markedly higher than the average for graduates with bachelor's degrees in other disciplines. More than 85% of these graduates were employed two years after graduation compared with 67% for graduates with bachelor's degrees taken as a whole. Moreover, their jobs were generally more directly and more frequently related to their education than the average.

Occupational profile

The occupational profile of these graduates two years after graduation reflects clearly the close link between education and work. Nearly 70% of employed graduates were working as administrators. In this respect, the largest occupational group remained, according to the 1988 survey of graduates, that of financial officers (40%), which includes accountants. Sales managers also accounted for a sizeable group with 10% of jobs. Besides administrators, sales occupations offered opportunities, especially as sales representatives.

Salary

The average salary of graduates working two years after graduation was $26,500 annually in 1988. This is comparable to the average salary of graduates with a bachelor's degree taken as a whole.

General picture

The labour market offers these graduates some of the best job entry possibilities. In addition, it provides excellent opportunities for jobs directly related to education, while offering salary conditions comparable to those enjoyed on average by other graduates with equivalent qualifications.

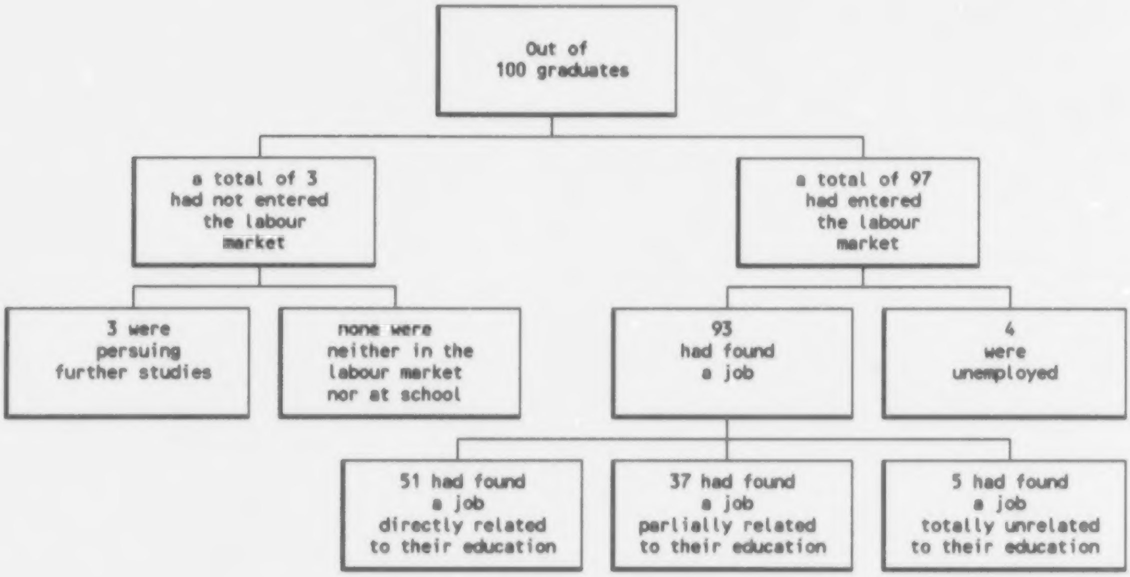
During the coming years, the labour market in occupations in this field of study is likely to continue to hold out very good prospects. Overall, demand for managers is expected to exceed the supply of qualified candidates.

COMMERCE AND MANAGEMENT

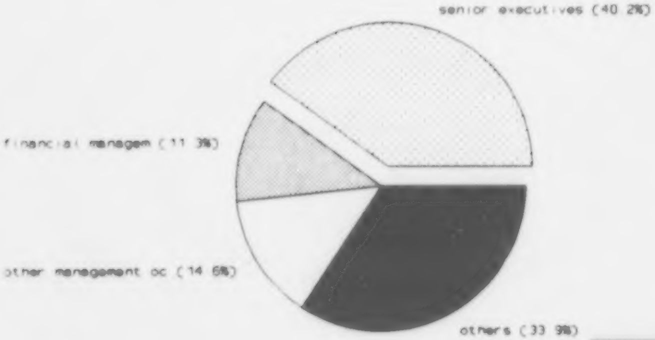
MASTER'S DEGREE AND DOCTORATE

COMMERCE, MANAGEMENT AND ADMINISTRATION

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 3 had not entered the labour market
a total of 97 had entered the labour market
3 were persuing further studies
none were neither in the labour market nor at school
93 had found a job
4 were unemployed
51 had found a job directly related to their education
37 had found a job parlially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	800	19.4	1.1
1985/90	900	17.8	1.0
1990/95	810	17.1	1.0
1995/2000	740	17.1	1.1

COMMERCE AND MANAGEMENT
MASTER'S DEGREE AND DOCTORATE

Concordia, Laval, McGill, Montréal (HEC), Sherbrooke and the various campuses of the University of Quebec offer a wide range of programs in management, accounting, business and taxation. Specialized programs in health care administration (University of Montréal) and public administration (ENAP) are also available.

Trends and projections

The popularity of this discipline among graduate students reached a peak in the mid-1980s, when more than 20% of master's degrees and doctorates were in this field. The percentage dropped gradually to approximately 17% in 1989. We anticipate that the proportion will remain constant during the 1990s. Given the demographic drop in university students at this level, the average number of graduates should drop by about 100 between 1990 and 2000. Nevertheless, this field of study will continue to account for the greatest number of graduates, with about 750 to 800 annually.

Graduates' labour market participation

According to the 1988 survey, these graduates were among those most likely to enter the labour market, their participation rate being 97%. They were also among the luckiest as regards placement, since barely 4% were unemployed at the time of the survey. Nearly 90% of jobs held were at least partly related to education, a rate higher than the average for university graduates.

Occupational profile

Despite the close link between education and work, the occupational profile of these graduates was varied: 65% worked in management, including 20% as financial officers or managers. Among the others, occupational categories in the natural sciences and engineering accounted for 11% of graduates; workers in the social sciences, 8%; and teachers, 3%.

Salary

The average annual salary of graduates who responded to the survey and who were working full time was $48,100. This was 25% greater than that of graduates with master's degree and doctorates as a whole.

General picture

The statistics show above average placement and salaries for graduates in this field of study two years after graduation. As suggested by the wide variety of occupations, many graduates probably had significant labour market experience, making access to management positions easier for them. Consequently, they are in a favourable labour market position.

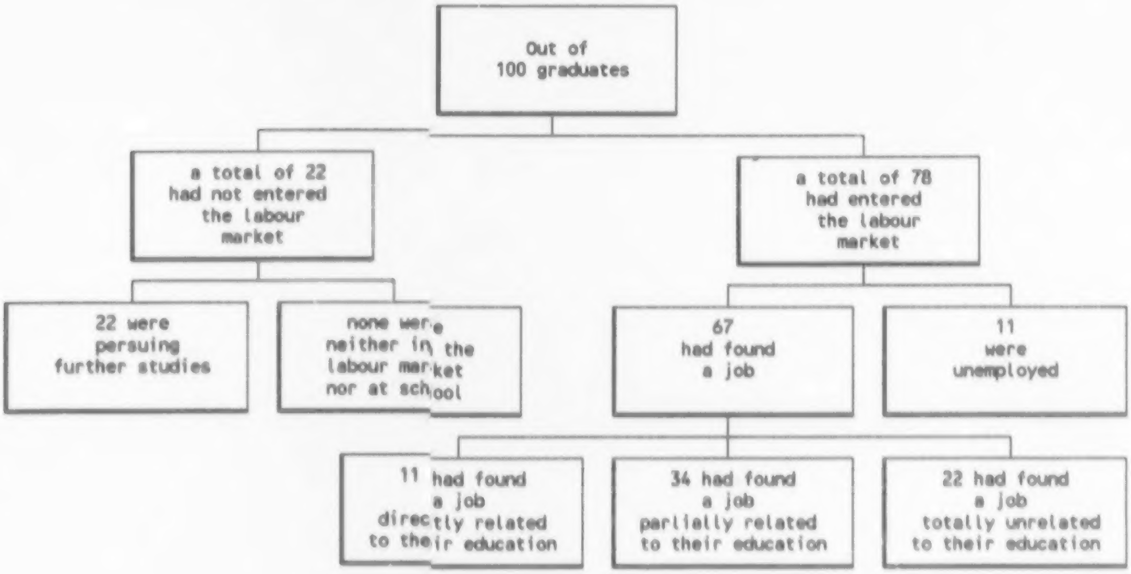
For these reasons and given the expected trends in management requirements, job opportunities for these graduates should remain above average in the coming years.

HUMANITIES

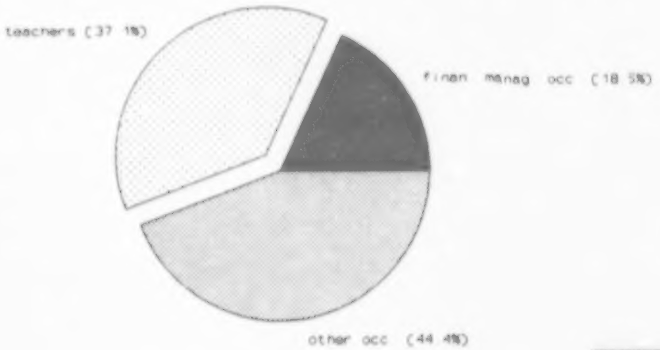
ENGLISH
BACHELOR'S DEGREE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 22 had not entered the labour market
a total of 78 had entered the labour market
22 were persuing further studies
none were neither in the labour market nor at school
67 had found a job
11 were unemployed
11 had found a job directly related to their education
34 had found a job partially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	290	1.3	0.3
1985/90	360	1.5	1.0
1990/95	375	1.5	0.9
1995/2000	375	1.5	0.9

ENGLISH
BACHELOR'S DEGREE

The study of the English language, its linguistic rules, literature and conventions of literary creativity comprise the core of the English literature program. Bishop's, Concordia, Laval, McGill, Montréal and Sherbrooke universities all offer an English literature program. There is generally no prerequisite, but students must demonstrate an advanced knowledge of the English language.

Trends and projections

The popularity of this field of study has remained constant over the past few years, and an average of 300 to 400 students have obtained bachelor's degrees in it each year. Approximately the same number of graduates are expected over the coming decade.

Occupation after graduation

According to the survey of graduates, the participation rate of graduates in English literature was slightly higher than that of graduates with bachelor's degrees taken as a whole. Despite this higher rate, the proportion of those who were employed two years after graduation was about the same at that of graduates with bachelor's degrees taken together, indicating a slightly higher unemployment rate. Only two out of three graduates in this discipline were working in an occupation at least partially related to their education, a level much lower than for other graduates.

Occupational profile

The occupational profile of these graduates reflects the difficulties they have in finding a job related to their education. Teaching is still the occupation that offers the greatest opportunity, and 40% of employed graduates were working in that field.

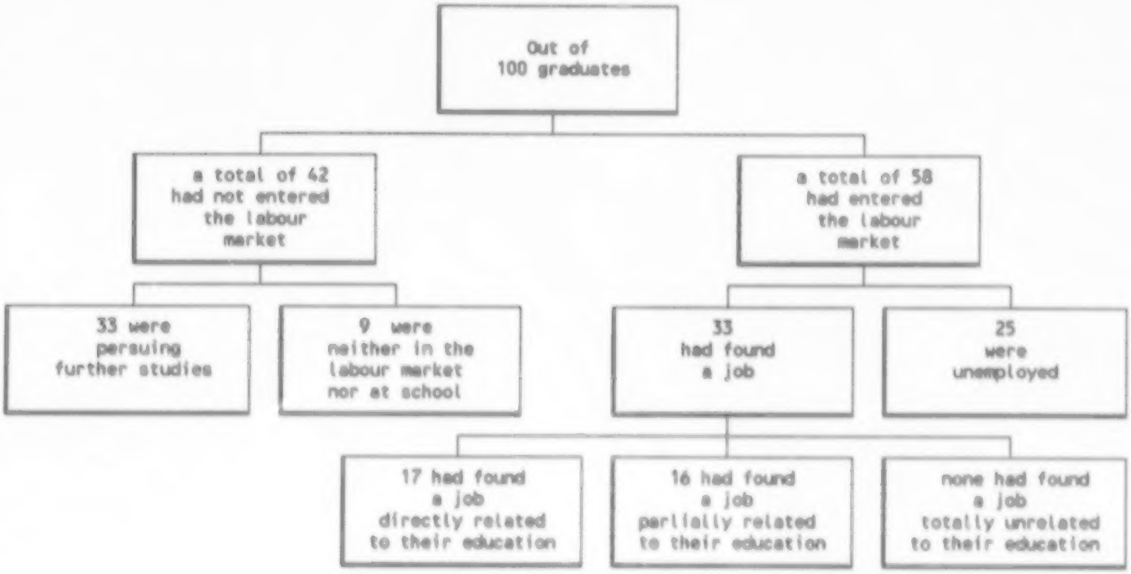
General picture

The labour market offers few opportunities to these graduates in terms of jobs related to their education. All the same, in a proportion equal to the average, graduates in this discipline would make the same academic choice over again.

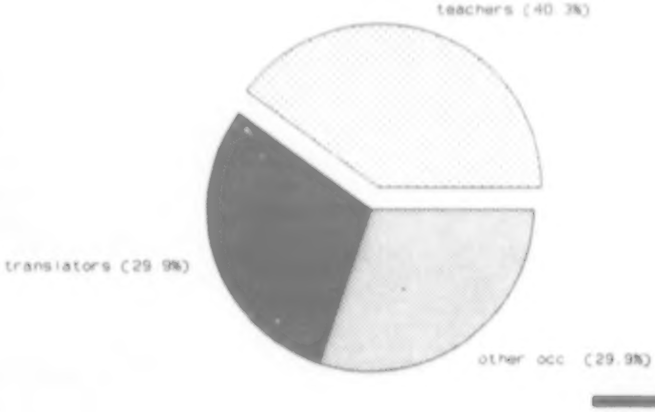
During the coming years, labour market entry for these graduates should remain the same as over the past number of years.

FRENCH
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 42 had not entered the labour market
a total of 58 had entered the labour market
33 were persuing further studies
9 were neither in the labour market nor at school
33 had found a job
25 were unemployed
17 had found a job directly related to their education
16 had found a job partially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	350	1.6	---
1985/90	300	1.2	1.0
1990/95	300	1.2	0.9
1995/2000	300	1.2	1.0

HUMANITIES

FRENCH
BACHELOR'S DEGREE

The study of French literature and conventions of literary creativity comprise the core of the French literature program. Most Quebec universities offer a program of study in this discipline. There is generally no specific prerequisite besides a Diploma of Collegial Studies or equivalent. Applicants must, however, demonstrate a sufficient knowledge of the French language.

Trends and projections

The popularity of this field of study has dropped slightly over the past 10 years, the proportion of graduates with bachelor's degrees in this field to graduates with bachelor's degrees taken as a whole declined from 2% in 1980 to 1.2% in 1989. All the same, it is estimated that 300 students a year will graduate in this field over the next decade, if current trends continue.

Occupation after graduation

The labour market participation rate for these graduates is appreciably below the average for graduates with bachelor's degrees taken as a whole. At the same time, a much higher than average percentage had decided to pursue further studies. This is due in large part to difficult labour market conditions, reflected by the high number of graduates who were unemployed two years after graduation. All the same, those who had succeeding in finding a job were more often working in an occupation at least partially related to their education.

Occupational profile

The occupational profile of these graduates typifies the link between education and work. Forty per cent of graduates were working as teachers, while library administrators and translators/interpreters each accounted for 30% of jobs obtained.

General picture

A tight labour market seems to await these graduates when they finish their degrees. Few had been able to find a job two years after graduation, and many of those who had were working part time. Term employment also seems to characterize their first few years in the labour market and explains why a high unemployment rate is coupled with a close link between work and education. Only 50% of these graduates said they would make the same academic choice.

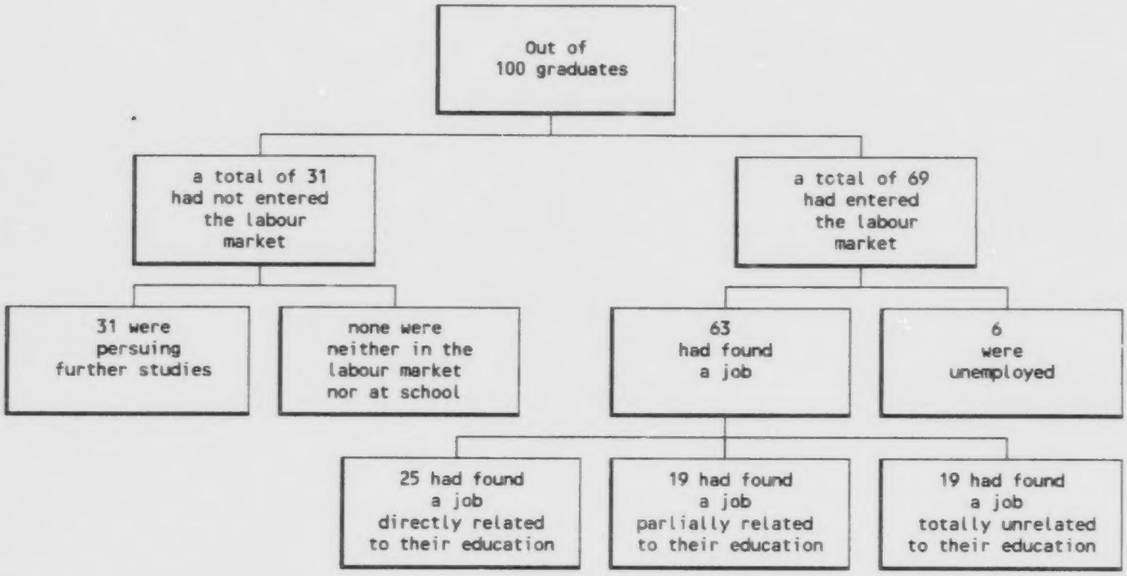
During the coming decade, the labour market for these professionals is not expected to improve significantly, in view of the number of graduates and the relatively few openings forecast in the occupations in which they usually find employment. Because teaching is a not unimportant means of entry into the labour market, further studies in teacher training can be a major asset.

LINGUISTICS TRANSLATION-INTERPRETATION

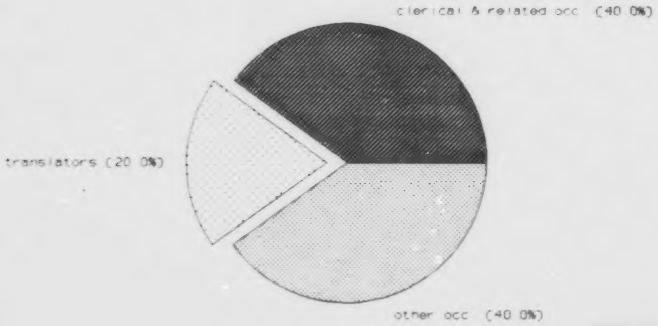
HUMANITIES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 31 had not entered the labour market
a total of 69 had entered the labour market
31 were persuing further studies
none were neither in the labour market nor at school
63 had found a job
6 were unemployed
25 had found a job directly related to their education
19 had found a job parlially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	390	1.7	0.7
1985/90	380	1.5	1.0
1990/95	400	1.6	1.1
1995/2000	400	1.5	1.2

HUMANITIES

LINGUISTICS
TRANSLATION-INTERPRETATION
BACHELOR'S DEGREE

A program of studies in linguistics is offered at Concordia, Laval, McGill, Montréal, UQAM and UQAC. Concordia, Laval, Montréal and UQTR also grant degrees in translation/interpretation. Prerequisites vary from university to university, but a thorough knowledge of French and/or English is a basic requirement for students of translation.

Trends and projections

The number of graduates in the different disciplines making up this field of study has grown at a rate comparable to the number of graduates with a bachelor's degree taken as a whole, so that since the early 1980s they have accounted, on average, for 1.5% of a graduates at this level. If this trend continues over the coming years, there will be 400 graduates annually in these disciplines throughout the 1990s.

Occupation after graduation

The results of the survey of graduates conducted in 1988 indicate that nearly 70% of graduates in this field of study were in the labour market two years after graduation, a rate slightly lower than that of graduates with bachelor's degrees taken as a whole. If a proportion somewhat smaller than the average were employed, a higher percentage had decided to continue their education, making the unemployment rate comparable to that of graduates taken as a whole. Nearly 70% of those who had found jobs held positions at least partially related to their education. Although respectable, this proportion is all the same lower than the average, since 85% of all employed graduates said they held jobs directly or partially related to their education.

Occupational profile

The occupational profile of these graduates was relatively fragmented. Among the most significant occupations in terms of link with education, that of translators and interpreters accounted for 20%.

Salary

In the survey of graduates, the average salary ($23,000 annually) reported by respondents employed full timed was approximately 10% below that reported by graduates at this level taken as a whole.

General picture

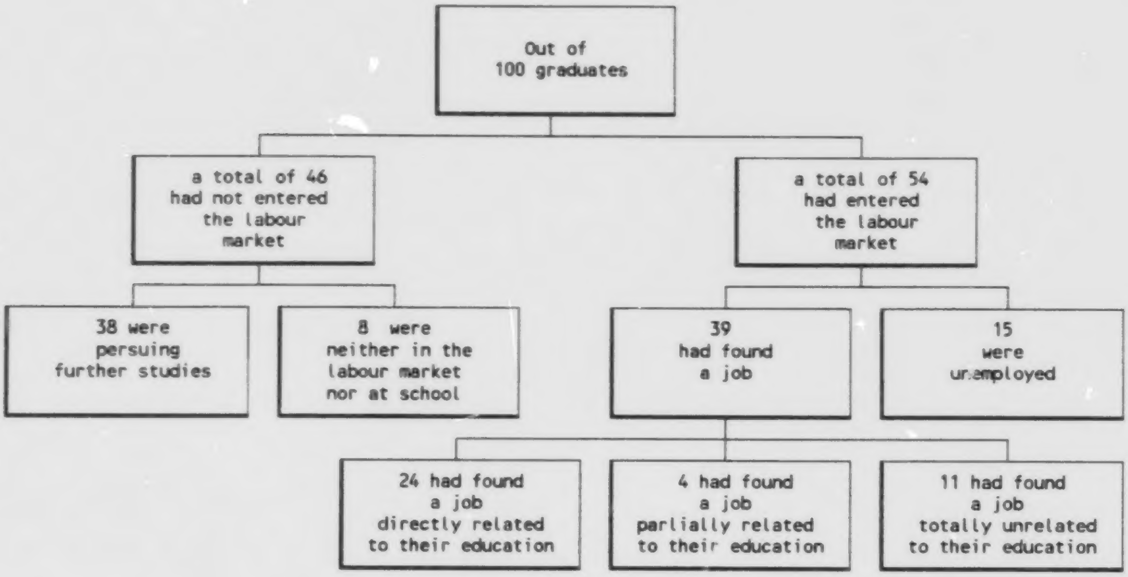
The trends revealed by the preceding data indicate that these graduates are facing a slightly more difficult labour market than the average. A lower than average number were working in occupations directly related to education, and salaries were also below average. This probably explains why a higher proportion of graduates decided to continue their education. A little more than 55% of them said they would make the same academic choice, compared with nearly 70% of graduates with bachelor's degrees taken as a whole.

During the 1990s, labour market entry conditions could improve, even if the market is not likely to be able to absorb all graduates. Growth in requirements in occupations most closely related to education is higher than requirements in all occupations taken together. Contract work will continue to be a basic characteristic of many jobs in this sector.

LANGUAGES AND LITERATURE
MASTER'S DEGREE AND DOCTORATE

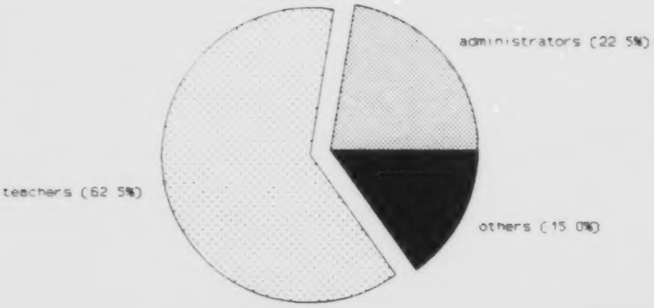
HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 46 had not entered the labour market
a total of 54 had entered the labour market
38 were persuing further studies
8 were neither in the labour market nor at school
39 had found a job
15 were unemployed
24 had found a job directly related to their education
4 had found a job parlially related to their education
11 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	155	3.7	1.3
1985/90	185	3.7	1.0
1990/95	180	3.8	0.9
1995/2000	165	3.8	1.0

LANGUAGES AND LITERATURE
MASTER'S DEGREE AND DOCTORATE

This category includes such major disciplines as linguistics (Concordia, Laval, Montréal, UQAC and UQAM), literature (Montréal, McGill, Sherbrooke and UQ), English (Concordia, McGill and Montréal), French (Laval, McGill, Montréal and Sherbrooke), as well as German, Spanish and Russian studies (McGill and Montréal).

Trends and projections

Since the early 1980s, the percentage of graduates in this category has remained more or less constant. If the trend continues over the coming years, the annual average number of graduates should be 170 until the end of the decade.

Graduates' labour market participation

The participation rate of graduates two years after finishing their programs was markedly lower than that of graduates with postgraduate degrees as a whole. A sizeable proportion had decided to pursue further studies. Most of those who had decided to enter the labour market were employed, the unemployment rate being average. However, nearly 30% of employed graduates considered that their work was in no way related to their education. This is a significantly higher percentage than that among graduates with master's degrees or doctorates as a whole, 10% of whom were in such a position.

Occupational profile

The occupational group accounting for the highest number of employed graduates was teachers. University teaching was the most common with 23% of jobs. The second largest category was that comprising management positions, held by more than 20% of graduates.

General picture

During the second half of the 1980s, a slight drop in hiring for jobs related to this field of study was observed. The situation has remained difficult for these graduates, as evidenced by the low participation rate and weak link between education and work. The lower level of satisfaction with their education expressed by these graduates is another indication of the difficult situation.

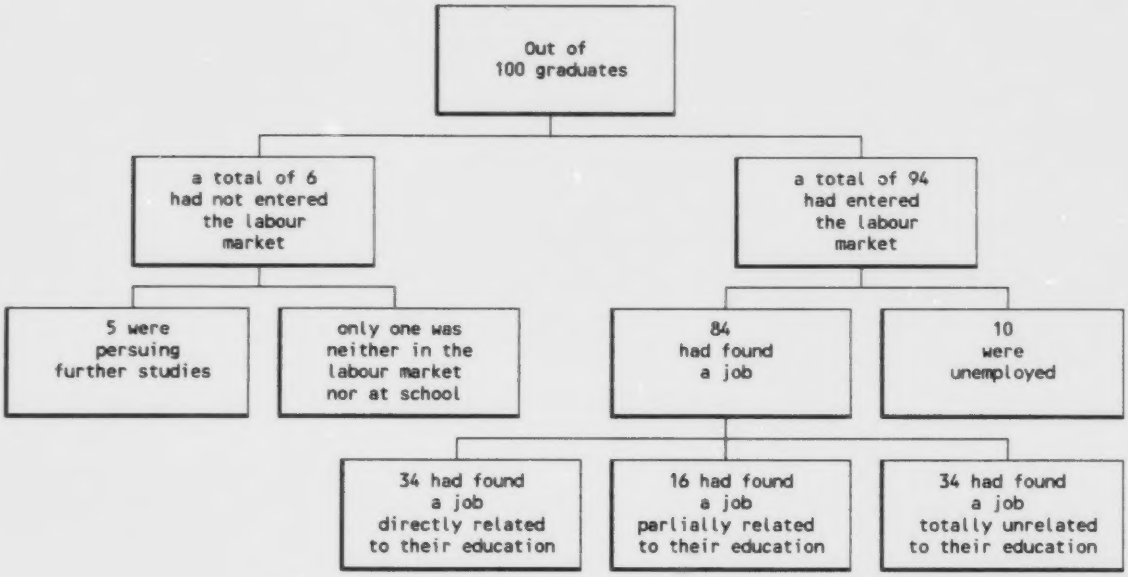
Labour market entry conditions should remain basically the same during the 1990s as they were during the past number of years. Since teaching provides many openings, additional studies in education will continue to be an important asset for those who wish to pursue a career in teaching.

DOCUMENTATION TECHNOLOGY

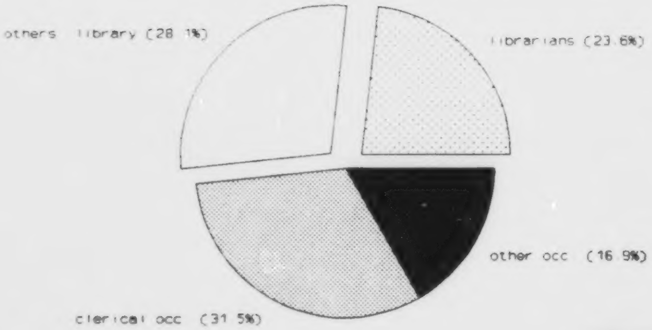
HUMANITIES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 6 had not entered the labour market
a total of 94 had entered the labour market
5 were persuing further studies
only one was neither in the labour market nor at school
84 had found a job
10 were unemployed
34 had found a job directly related to their education
16 had found a job parlially related to their education
34 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	180	1.2	0.8
1985/90	175	1.2	1.0
1990/95	155	1.2	1.4
1995/2000	160	1.2	1.5

DOCUMENTATION TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

The study program in documentation technology is available in the Outaouais, Mauricie-Bois-Francs, Montreal, Laurentian, Quebec City and Saguenay-Lac St-Jean regions.

Trends and projections

The number of graduates in this discipline has been up and down over the past decade, reaching a peak of 225 in 1984 and a low of 135 in 1982. If its relative importance of the past few years persists, an average of some 150 to 160 students will graduate each year over the next decade.

Occupation after graduation

Of those who entered the labour market, the placement rate was slightly lower than the average when taken as a whole and appreciably lower than the average when we consider jobs at least directly related to education. In fact, barely 50% of the jobs held had any relation to education compared to more than 80% for the graduates taken as a whole. Nonetheless, a markedly lower than average proportion decided to continue their studies after graduation. The fact that no program in library science is offered at the bachelor's level is certain to have a great deal of bearing on this decision.

Occupational profile

The occupational profile of graduates who were employed one year after completing their studies was clearly dominated by the occupational group of library employees and that of librarians, each accounting for 23% of the jobs held. The other occupational groups that provided a means of entry into the labour market for these graduates were those in the administrative support staff and services category.

Salary

The average salary of respondents to the Relance Survey who were working full time in the first year after graduation was $15,800 annually. This salary level was $2,000 lower than that of vocational college graduates taken as a whole.

General picture

Due to the growing requirement for information in most activity sectors, the demand for documentation professionals has experienced a more rapid than average growth over the past few years. The automation of repetitive or mechanical tasks, however, has tended to create the need for more versatile personnel who are more oriented towards user support. Even if they were less affected by the development of databases than their university colleagues, documentation technology graduates have nonetheless benefited a great deal from the employment opportunities generated by the maintenance and daily use of this technology.

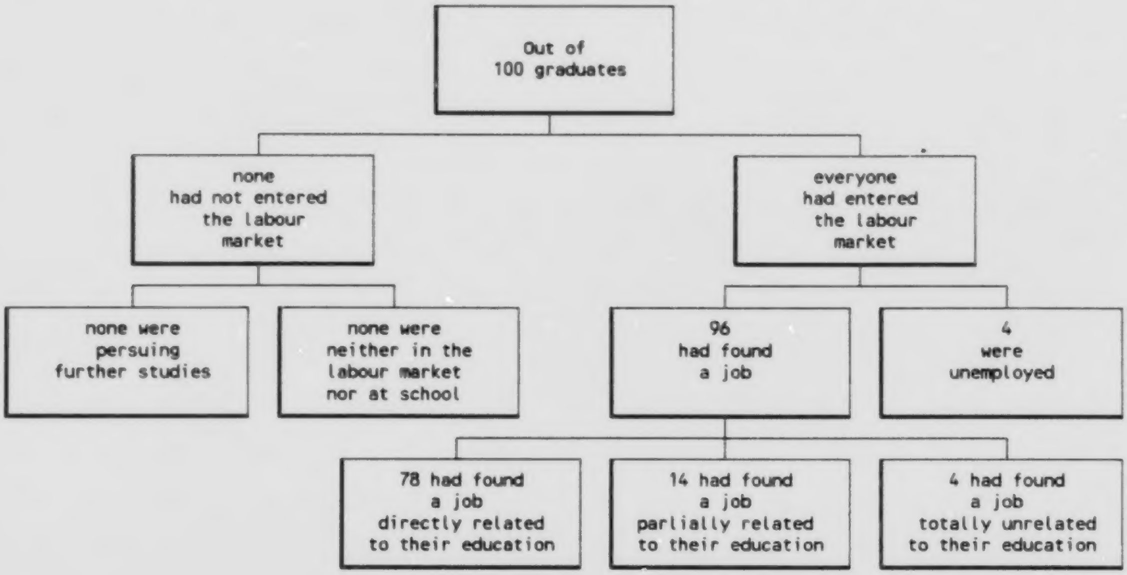
Over the coming years, the growth of employment in occupations linked to this field of training should continue. While over the past few years job prospects for these graduates were fewer than the average, they should gradually improve over the 1990s and compare favourably to the average. As traditionally active employment sectors such as libraries and public reference centres will not constitute the most dynamic sectors, the search for employment will increasingly have to include other activity sectors.

LIBRARY SCIENCE

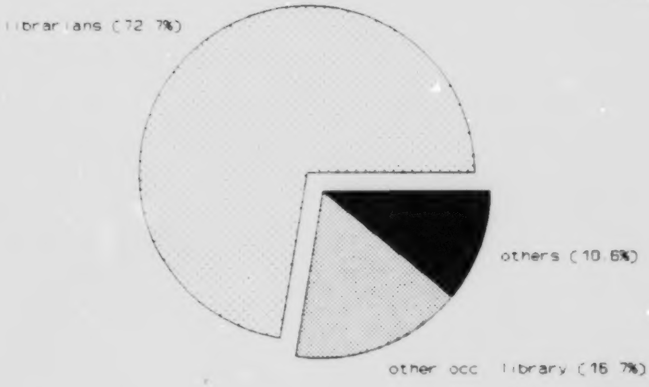
HUMANITIES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
none
had not entered
the labour
market
everyone
had entered
the labour
market
none were
persuing
further studies
none were
neither in the
labour market
nor at school
96
had found
a job
4
were
unemployed
78 had found
a job
directly related
to their education
14 had found
a job
parlially related
to their education
4 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	125	3.1	0.9
1985/90	120	2.3	1.0
1990/95	105	2.3	1.5
1995/2000	100	2.3	1.7

MASTER'S DEGREE AND DOCTORATE

McGill University and the University of Montréal offer master's programs in library science and information science. Master's degrees in museology are offered at the University of Quebec at Montréal and the University of Montréal.

Trends and projections

The popularity of this discipline declined during the 1980s, the percentage of graduates dropping from 3.6% at the beginning of the decade to 2.2% at the end. The proportion may level off during the 1990s, leading to a drop in the annual number of graduates to about 100 by the end of the century.

Graduates' labour market participation

According to the 1988 survey of 1986 graduates, all graduates in this field of study had entered the labour market two years after obtaining their degrees. The placement rate was very high, while the unemployment rate was below the average of 6% for graduates with master's degrees or doctorates as a whole. Moreover, the proportion of jobs at least partly related to education was among the highest: more than 95% of positions held were directly or indirectly related to studies, compared with an average of 85% among graduates with advanced degrees as a whole.

Occupational profile

The occupational profile reflects the close link between job and education, since nearly 90% of employed graduates were working as specialists in a library, museum or archive. Positions as librarians or archivists alone accounted for almost 75% of jobs.

Salary

While the placement statistics on this field of study make it one of the most attractive, the salary figures make it less inviting. According to the Statistics Canada survey, graduates working full time were earning an average annual salary of $25,900. This was considerably lower than the $37,400 earned annually by graduates with advanced degrees as a whole.

General picture

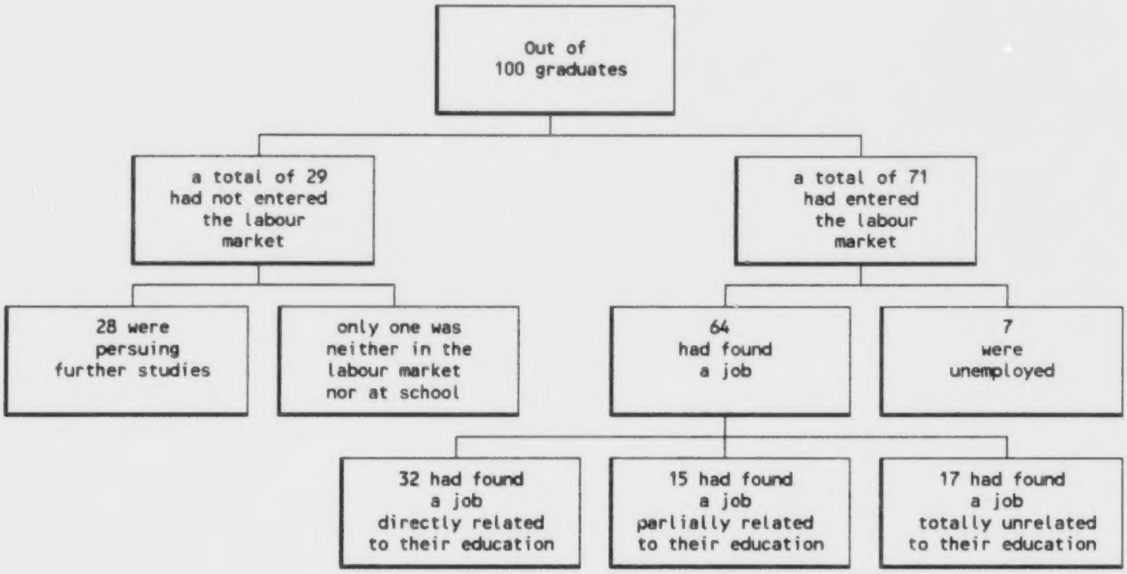
The dichotomy between the data on placement and that on salaries is a reflection of the fact that these jobs are not permanent. A large number of graduates work as free lances and therefore are more vulnerable to interruptions in income. Employment irregularity has increased over the past few years, as the profession of librarian has extended beyond institutional libraries to other sectors, notably the service sectors.

Over the coming years, the demand for information specialists is expected to remain high and job opportunities abundant. The sector, however, is likely to continue undergoing profound changes, as a new profession--information broker--emerges. Free lance work should remain popular, but specialized firms may spring up, thus increasing the number of permanent jobs available.

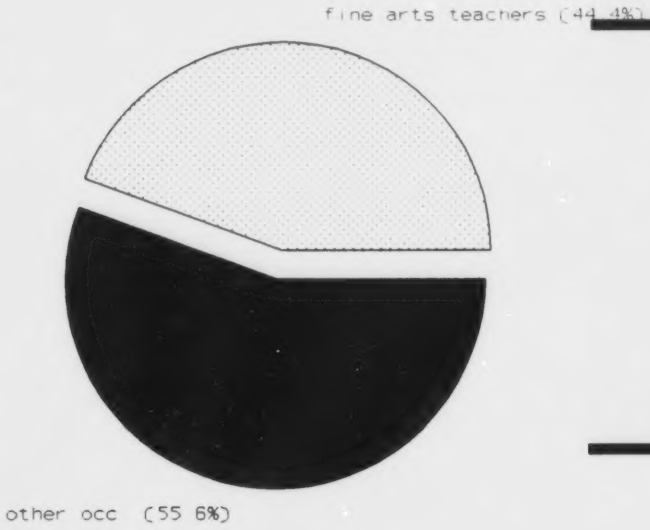
MASS COMMUNICATIONS HUMANITIES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 29 had not entered the labour market
a total of 71 had entered the labour market
28 were persuing further studies
only one was neither in the labour market nor at school
64 had found a job
7 were unemployed
32 had found a job directly related to their education
15 had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	75	0.5	1.5
1985/90	85	0.6	1.0
1990/95	80	0.6	1.0
1995/2000	80	0.6	1.1

MASS COMMUNICATIONS
VOCATIONAL COLLEGE DIPLOMA

This program in media art and technology is offered only at the Jonquière Cegep.

Trends and projections

From an average of 75 during the first half of the 1980s, the number of graduates reached an average of 85 annually in the second half of the decade. This growth was slightly more rapid than the average, raising the relative importance of this discipline from 0.5% to 0.6% in the vocational college sector overall. During the 1990s, the number of graduates should remain more or less at the current level.

Occupation after graduation

A greater than average proportion of graduates were pursuing their studies in the year after graduation. For the graduates who entered the labour market, placement in jobs which were at least partially related to education was lower than the average and the unemployment rate was slightly higher.

Occupational profile

A little more than 45% of graduates who were employed one year after they completed their studies were working in an occupation in the arts category. Of these, the most common groups were the writers groups (journalists, columnists and technical writers), accounting for 15% of the jobs, radio and television announcers, with 15% of the jobs and producers-directors, with nearly 10% of the jobs. As for the graduates taken as a whole, the occupational groups related to secretarial arts and sales constituted the most frequent means of entry into the labour market.

Salary

According to the 1988 Relance Survey, graduates in this discipline who were working full time in the year after they completed their studies were earning an average of $18,200 annually.

General picture

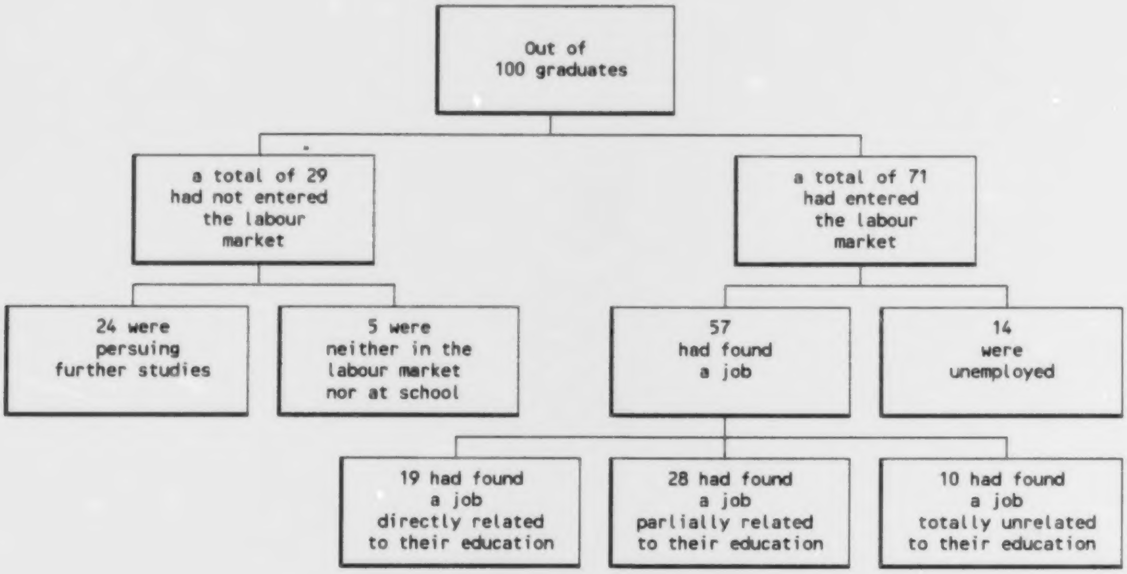
If education-related placement is taken into account, employment opportunities for these graduates were slightly lower than the average. Moreover, these graduates had to contend with competition from graduates with bachelor's degrees in communications, a certain number of whom entered the labour market in the same occupational categories with more success than college graduates. This situation probably explains in part the decision of a high proportion of college graduates to continue their studies.

The comparative growth in the number of graduates and in the demand in related occupations indicate that the outlook could improve somewhat during the next few years. This is especially true for written communications, which will continue to benefit from the proliferation in the past few years of specialized magazines and newspapers and the rising demand in the area of technical writing. However, this outlook will still be less encouraging than for vocational college graduates taken as a whole.

OTHER MASS COMMUNICATIONS HUMANITIES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 29 had not entered the labour market

a total of 71 had entered the labour market

24 were persuing further studies

5 were neither in the labour market nor at school

57 had found a job

14 were unemployed

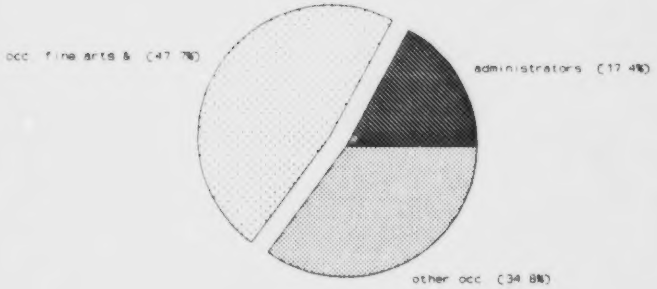
19 had found a job directly related to their education

28 had found a job parlially related to their education

10 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	275	1.3	1.8
1985/90	345	1.4	1.0
1990/95	350	1.4	0.9
1995/2000	375	1.5	1.0

OTHER MASS COMMUNICATIONS
BACHELOR'S DEGREE

This field of study includes cinema, radio and television, journalism, public relations and other forms of mass communications. An undergraduate program is offered at Concordia and UQAM. A major is possible at Concordia, Laval and Montréal. There is generally no prerequisite, but selection interviews may be held.

Trends and projections

During the 1980s, the number of graduates in these disciplines rose from 250 to 350. Thus it has maintained its relative importance in relation to bachelor's degrees as a whole. During the 1990s, the number of graduates is expected to remain the same as over the past few years.

Occupation after graduation

According to the 1988 survey of 1986 graduates, the participation rate of these graduates is slightly lower than that of graduates with bachelor's degrees taken as a whole. Among these graduates who were in the labour market, however, the employment rate was much lower than that of graduates in other fields, and the unemployment rate much higher. Moreover, jobs were more often only partially rather than directly linked to education.

Occupational profile

Nearly 50% of employed graduates were working in the arts sector. Among these, the occupational groups made up of writers and announcers (15%) and photographers and cameramen (15%) accounted for the highest concentrations.

Salary

According to the survey of graduates, the average salary of respondents working full time in 1988, or two years after graduation, was $21,400 annually. This was 20% below the average for other graduates with bachelor's degrees.

General picture

General labour market conditions for these graduates following graduation offered lower than average potential in terms of both job entry and salary. Those graduates who were working considered their jobs, on average, less related to their education that graduates in other disciplines. Moreover, a lower proportion that average said they would take the same programs today (approximately 60%).

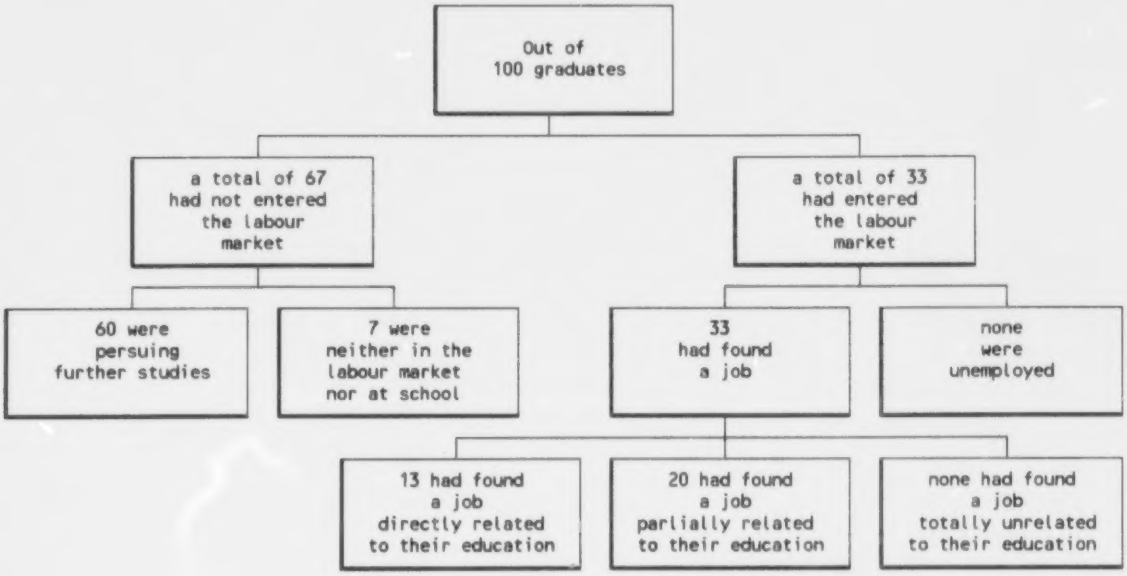
During the 1990s, the market will remain competitive in most of the disciplines making up this field of study. Prospects seem to be more promising, however, in specialties connected with the print media. The proliferation of trade magazines over the past few years and the growing demand for technical writers could provide job opportunities for these graduates. Competition from graduates in related disciplines could be a factor, however.

HISTORY

BACHELOR'S DEGREE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 67
had not entered
the labour
market
a total of 33
had entered
the labour
market
60 were
persuing
further studies
7 were
neither in the
labour market
nor at school
33
had found
a job
none
were
unemployed
13 had found
a job
directly related
to their education
20 had found
a job
parlially related
to their education
none had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**

non available

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	335	1.5	0.2
1985/90	290	1.2	1.0
1990/95	300	1.2	1.0
1995/2000	300	1.2	0.9

HISTORY
BACHELOR'S DEGREE

This field of study encompasses all the specialized disciplines of history, except the teaching of history. Most Quebec universities offer study programs in history. There is no prerequisite in most universities.

Trends and projections

The popularity of this discipline has declined over the past few years. In the various Quebec universities the proportion of graduates in this field to graduates with bachelor's degrees taken as a whole dropped from more than 2% in the late 1970s to slightly more than 1% in 1989. If the trends of the past few years continue, 300 students will graduate each year over the coming decade.

Occupation after graduation

According to the 1988 survey of graduates, about 60% of respondents with bachelor's degrees in this discipline were still in school two years after graduation. All those who entered the labour market succeeded in obtaining jobs they considered at least partially related to their education.

Occupational profile

Given the small number of respondents to the 1988 survey who were employed and their occupational diversity, it was not possible to extract any relevant information concerning occupational profile and salary for this discipline.

General picture

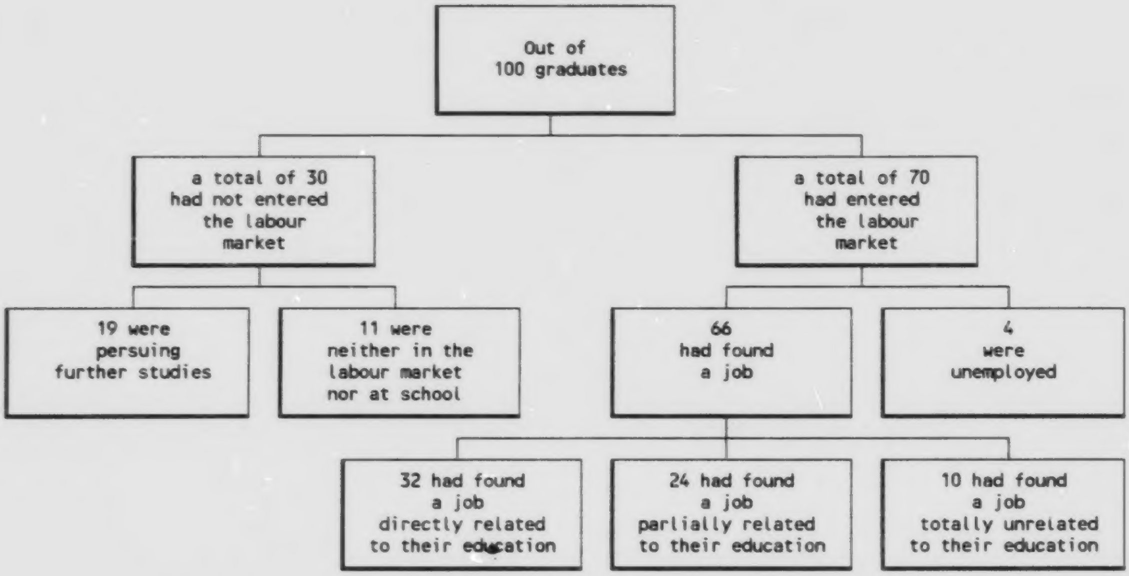
The labour market does not seem to offer graduates in this discipline sufficient prospects to give rise to a participation rate comparable to that of other disciplines at the bachelor's level. Although the data tend to show a close link between employment and education, the small proportion of employed graduates is a predominant factor in the statistics and clearly reflects the market's limited job opportunities. All the same, a proportion of graduates comparable to other graduates with bachelor's degrees indicated that they would make the same academic choice.

It is very unlikely that employment conditions for these graduates will improve even slightly over the coming years. Whether with regard to secondary school teaching, college teaching or specialized work in the social sciences, forecasts all point to a possible labour surplus.

HISTORY
MASTER'S DEGREE AND DOCTORATE

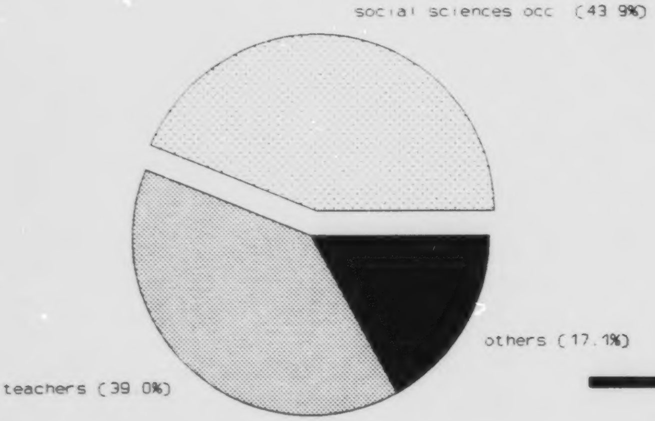
HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 30
had not entered
the labour
market
a total of 70
had entered
the labour
market
19 were
persuing
further studies
11 were
neither in the
labour market
nor at school
66
had found
a job
4
were
unemployed
32 had found
a job
directly related
to their education
24 had found
a job
partially related
to their education
10 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	1.6	0.4
1985/90	95	1.9	1.0
1990/95	90	1.9	1.1
1995/2000	80	1.9	1.0

HISTORY
MASTER'S DEGREE AND DOCTORATE

Bishop's, Concordia, Laval, McGill, Montréal, Sherbrooke and UQAM all offer a master's program in history and, except for Bishop's and Sherbrooke, a doctoral program also.

Trends and projections

After remaining more or less stable between 1977 and 1985, the number of graduates has risen to nearly 100 a year. This number is expected to drop slightly over the coming period mainly because of the diminishing demographic pressure of young people.

Graduates' labour market participation

According to the 1988 survey, the labour market participation rate of history graduates, like that of their colleagues with bachelor's degrees, was below average. More than 10% were neither working nor pursuing further studies, compared with 2% for graduates as a whole. The placement rate of those who had entered the labour market, however, was average. A proportion of 80% of employees who had found employment said their jobs were at least partly related to their education; this was close to the average. Nevertheless, a much lower than average number of graduates had jobs directly related to their education.

Occupational profile

Most graduates employed two years after graduation were working in one of two main occupational categories. More than 40% were working as social science professionals, a category under which historians are classified. Nearly 35% were working in various teaching positions.

Salary

In the 1988 survey of 1986 graduates, respondents working full time reported an average annual salary of $35,100. This was average for graduates with advanced degrees.

General picture

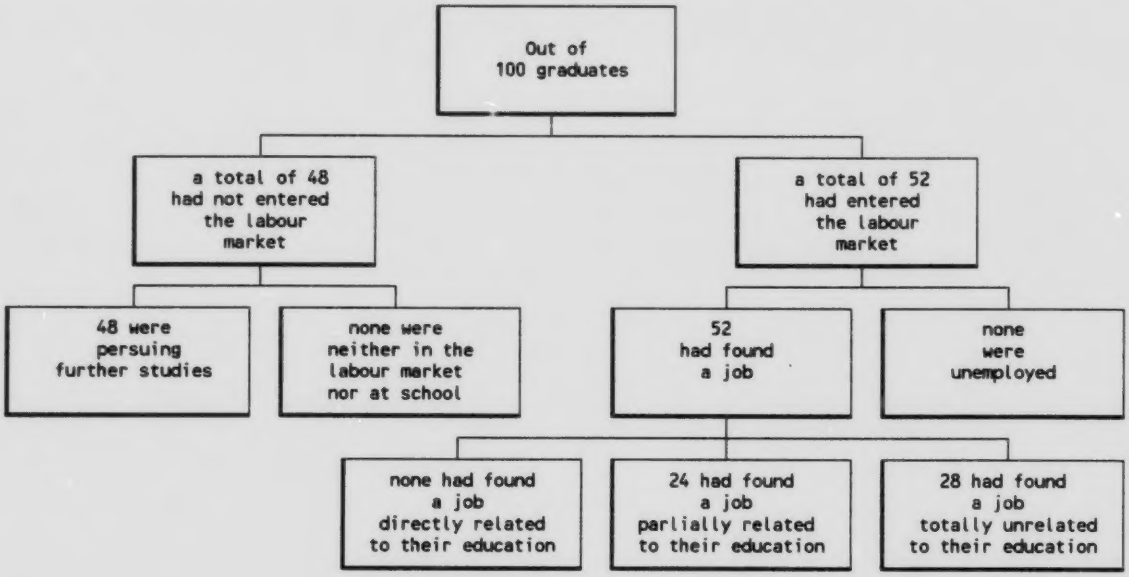
Certainly, these graduates are faced with a labour market offering more job opportunities than those available to their colleagues with bachelor's degrees. However, there are still not quite as many job opportunities proportionately as those available to graduates with master's degrees and doctorates as a whole. That is probably why 65% of these respondents said they would make the same academic choice, compared with 80% for the whole.

During the 1990s, budget constraints, which will affect the different levels of government, the main employer of social science specialists, and the drop in the number of secondary and college students, which could have an impact on the number of teachers required, will mean that job opportunities for graduates in history will remain below average.

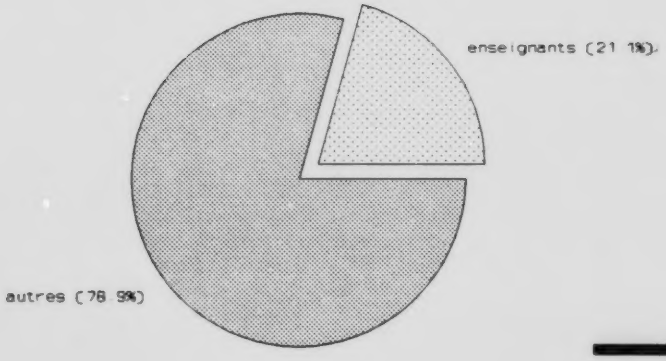
PHILOSOPHY-RELIGION
BACHELOR'S DEGREE

HUMANITIES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 48 had not entered the labour market
a total of 52 had entered the labour market
48 were persuing further studies
none were neither in the labour market nor at school
52 had found a job
none were unemployed
none had found a job directly related to their education
24 had found a job parlially related to their education
28 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	355	1.6	---
1985/90	320	1.3	1.0
1990/95	350	1.4	1.5
1995/2000	350	1.4	1.7

HUMANITIES

PHILOSOPHY-RELIGION
BACHELOR'S DEGREE

This study program is offered in most Quebec universities. Generally, there is no specific prerequisite other than a Diploma of Collegial Studies or equivalent.

Trends and projections

The number of graduates has remained more or less constant during the past decade. This number should remain between 300 and 350 annually over the 1990s.

Occupation after graduation

A markedly greater than average proportion of graduates chose to continue their studies after obtaining their degree. The large majority of those who had entered the labour market were employed two years after graduation. The jobs they held, however, were only slightly or not at all related to education.

Occupational profile

The occupational profile of these graduates is very diversified since two years after graduation they held jobs that were only slightly related to their education. Nonetheless, about 20% of these graduates had become secondary school teachers.

General picture

Like other studies at the university level, studies in this discipline are a definite asset to those wishing to enter the labour market. Access to the labour market in related occupations, however, requires that these studies be pursued at higher levels. Complementary qualifications in education can also improve market entry opportunities.

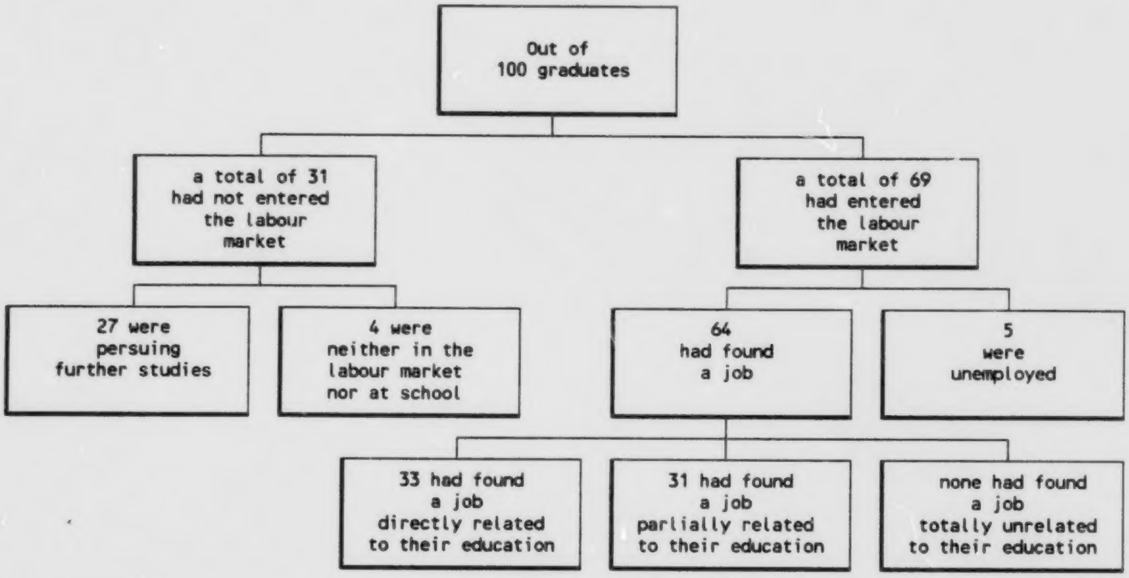
In the coming years, market prospects should remain very similar to those that have prevailed over the past few years.

PHILOSOPHY-RELIGION

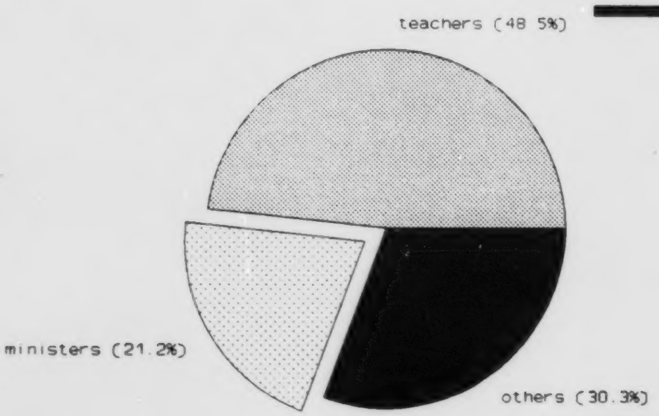
HUMANITIES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 31 had not entered the labour market
a total of 69 had entered the labour market
27 were persuing further studies
4 were neither in the labour market nor at school
64 had found a job
5 were unemployed
33 had found a job directly related to their education
31 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	160	3.9	---
1985/90	145	2.8	1.0
1990/95	120	2.6	1.4
1995/2000	100	2.3	1.7

PHILOSOPHY-RELIGION
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer programs in one or more of the specialties of theology, religious science or pastoral counselling.

Trends and projections

After showing a rise in the first half or the 1980s, the number of degrees in this field dropped slightly during the second half of the decade. The downward trend may continue in the coming years, with the average annual number of graduates reaching approximately 110.

Graduates' labour market participation

Twice as many graduates in this field were pursuing further studies two years after graduation as graduates with master's degrees and doctorates taken as a whole. More than 90% of those who had entered the labour market held positions at least partly related to education. The unemployment rate for these young graduates was 7%, slightly higher than the average for graduates with advanced degrees.

Occupational profile

The teaching profession offered the best job opportunities, with 45% of positions held. Primary and secondary school teachers alone accounted for 35% of jobs. Ministers of religion accounted for 20% of jobs held by graduates two years after receiving their degrees.

Salary

According to the 1988 survey of 1986 graduates, the average annual salary of respondents working full time was $28,000, very much below the average for graduates with a master's degree or doctorate.

General picture

Staff reductions in teaching during the first half of the 1980s certainly limited the job opportunities for these graduates. There has been some recovery since the mid-1980s, however, and the placement level is again comparable with that for other types of training.

The situation should remain the same over the coming years, as the drop in the number for primary and secondary teachers counterbalances the stabilization in the need for teachers at this level.

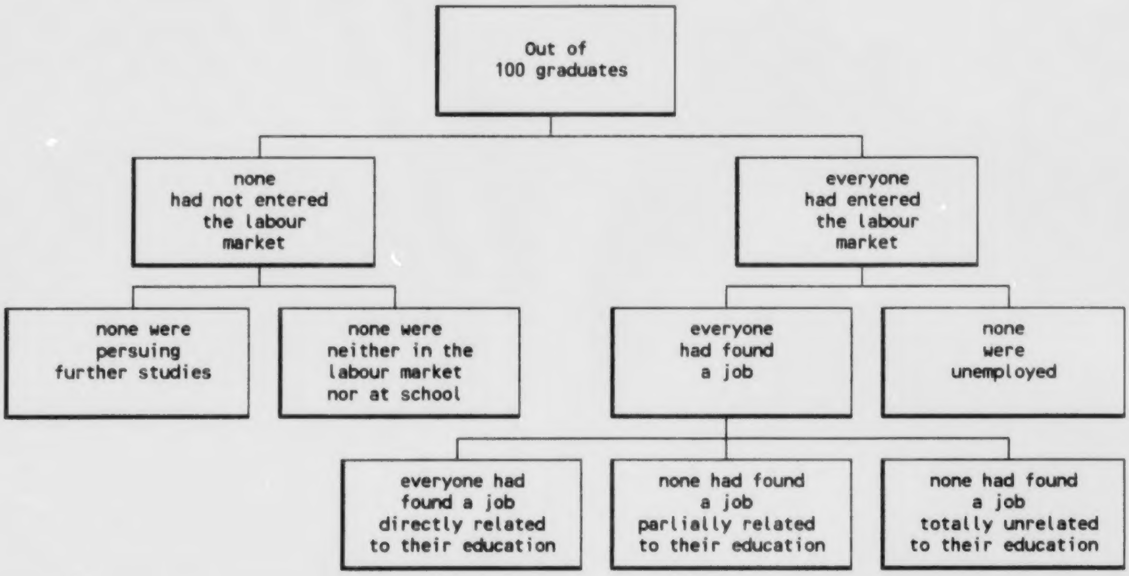
MEDICINE AND HEALTH

DENTISTRY

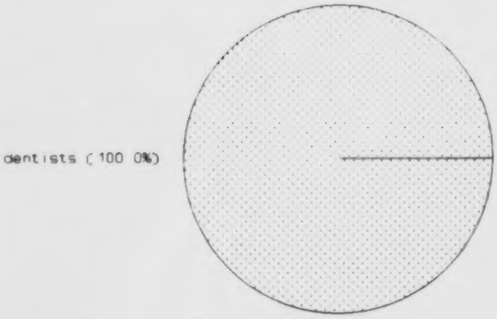
MEDICINE AND HEALTH

DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
none had not entered the labour market
everyone had entered the labour market
none were persuing further studies
none were neither in the labour market nor at school
everyone had found a job
none were unemployed
everyone had found a job directly related to their education
none had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	0.6	1.1
1985/90	160	0.6	1.0
1990/95	160	0.6	0.8
1995/2000	165	0.6	0.9

MEDICINE AND HEALTH

DENTISTRY

DOCTORATE

The universities of Laval, McGill and Montréal all offer programs in dentistry. Those who wish to enrol in these programs must have a solid base in college-level mathematics, physics, chemistry and biology. Candidates must also take the Canadian Dental Association's dentistry aptitude tests.

Trends and projections

Throughout the 1980s, the number of dentistry graduates in Quebec averaged about 145 annually. Given the increased number of university students, this number is expected to reach 160 during the 1990s.

Occupation after graduation

The results of the 1988 survey of graduates conducted by Statistics Canada shows that all those surveyed found a job that was directly related to their education.

Occupational profile

The occupational profile of these graduates fully reflects the situation described above since all the respondents were practising dentistry.

Salary

Significant variances in salary make it impossible to determine the respondents' average salary. However, this salary greatly exceeds the average salary of the other graduates taken as a whole if we take into account the fact that the lowest income of respondents to the survey was already $45,000 annually.

General picture

Both placement and salary indicators show that these graduates enjoyed a marked advantage over graduates with bachelor's degrees with respect to the labour market. The rate of satisfaction with education reflects this situation well since nearly 95% of the graduates said they would make the same choice.

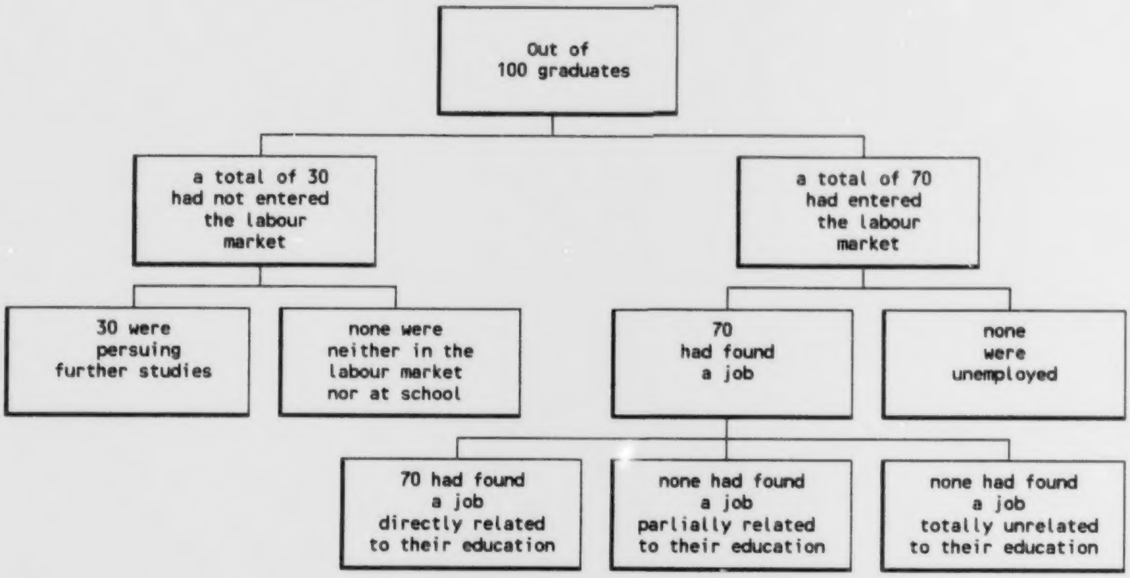
The relatively small number of graduates should make it possible to maintain excellent employment opportunities over the 1990s.

MEDICINE

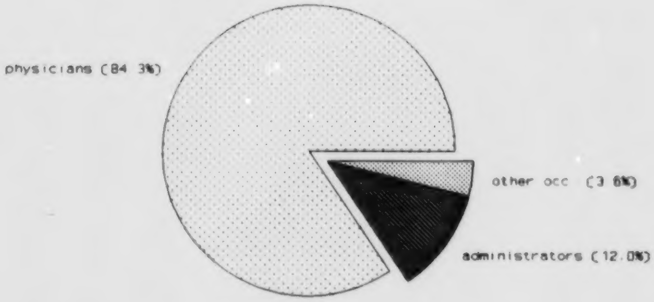
MEDICINE AND HEALTH

DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 30 had not entered the labour market
a total of 70 had entered the labour market
30 were persuing further studies
none were neither in the labour market nor at school
70 had found a job
none were unemployed
70 had found a job directly related to their education
none had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	635	2.9	0.9
1985/90	595	2.4	1.0
1990/95	600	2.3	0.8
1995/2000	625	2.4	0.9

MEDICINE
DOCTORATE

This program is offered by Laval, McGill, Montréal and Sherbrooke. Mathematics, physics, chemistry and biology are prerequisites. Applicants are usually also required to attend an interview and take admission tests. The program is 4 or 5 years long, depending on the university, and a subsequent one- or two-year internship is mandatory.

Trends and projections

With the exception of 1982, the 1980s saw little fluctuation in the number of graduates, which was approximately 600 annually. No changes are expected in the 1990s.

Occupation after graduation

According to the survey of graduates, 30% of graduates in medicine were continuing their education two years after graduation. The others were all working in an occupation directly related to their studies.

Occupational profile

The occupational profile of these graduates is of course dominated by the group of doctors and interns. Some graduates had moved into health services management careers.

General picture

Graduates in this discipline have no trouble entering the labour market. General practitioners and specialists that are in short supply in areas outside the major urban centres must, however, spend some time in the regions. Graduates in medicine were generally very satisfied, and 90% said they had made the right academic choice.

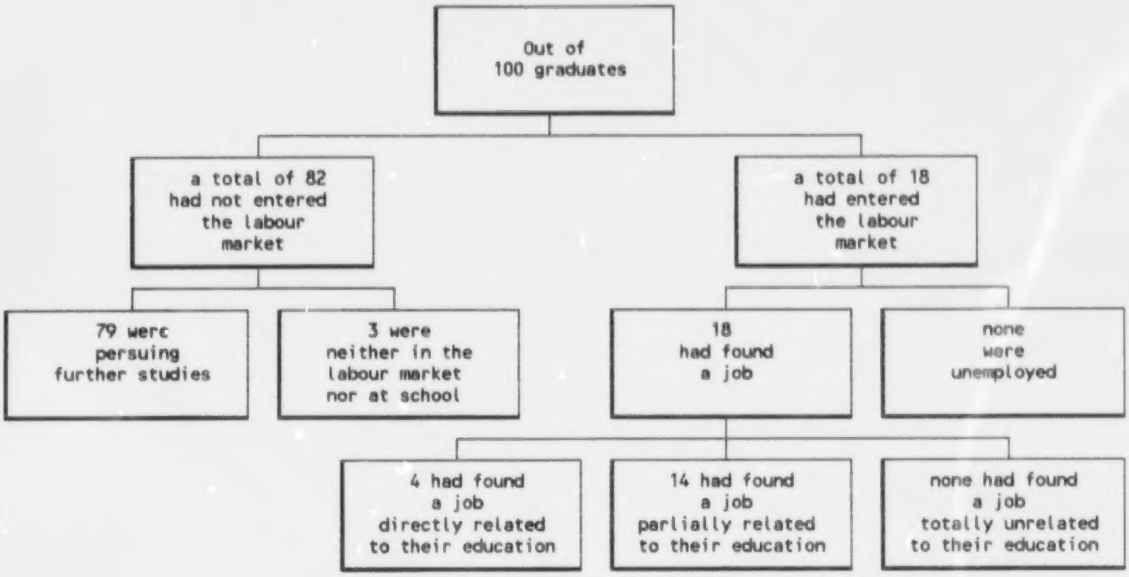
During the 1990s, labour market conditions will remain basically the same as over the last number of years.

BASIC SCIENCES IN MEDICINE

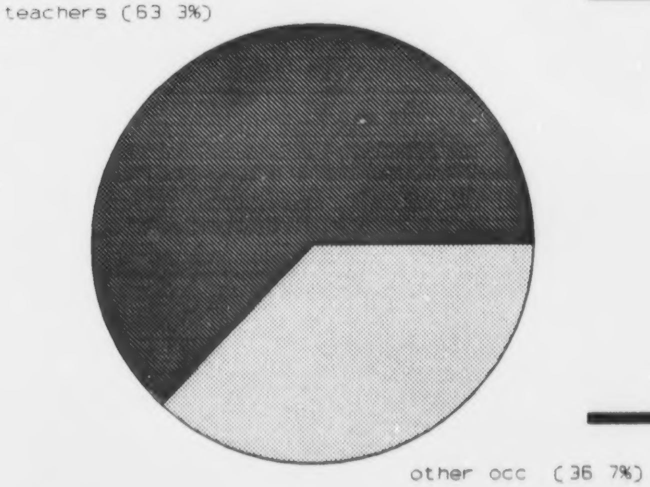
BACHELOR'S DEGREE

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 82 had not entered the labour market
a total of 18 had entered the labour market
79 werc persuing further studies
3 were neither in the labour market nor at school
18 had found a job
none were unemployed
4 had found a job directly related to their education
14 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	70	0.3	1.0
1985/90	95	0.4	1.0
1990/95	100	0.4	1.0
1995/2000	100	0.4	1.0

BASIC SCIENCES IN MEDICINE
BACHELOR'S DEGREE

This field of study encompasses such basic sciences in medicine as anatomy, biochemistry, biophysics, embryology, endocrinology, genetics and pharmacology. In view of the diversity of specialties, the reader is referred to the different university calendars for information on programs and admission.

Trends and projections

Although the popularity of this field of study declined during the first half of the 1980s, the number of graduates began rising again in 1986. If current trends continue during the 1990s, an average of approximately 100 graduates a year can be expected.

Occupation after graduation

Very few graduates with bachelor's degrees in these disciplines entered the labour market immediately. Nearly 80% of them were still continuing their education two years after obtaining their first degree. Among those who had decided to enter the labour market, there was no unemployment and most jobs were partially related to field of study.

Occupational profile

Jobs in teaching were the most frequent among these graduates.

General picture

Most graduates with a bachelor's degree in this discipline go on to further studies. Its specific labour market is closely connected to research and assisting in university teaching. Labour market entry in jobs directly related to education for those who do not wish to continue their education remains quite difficult. A below average number said they would make the same academic choice if they were to start university again.

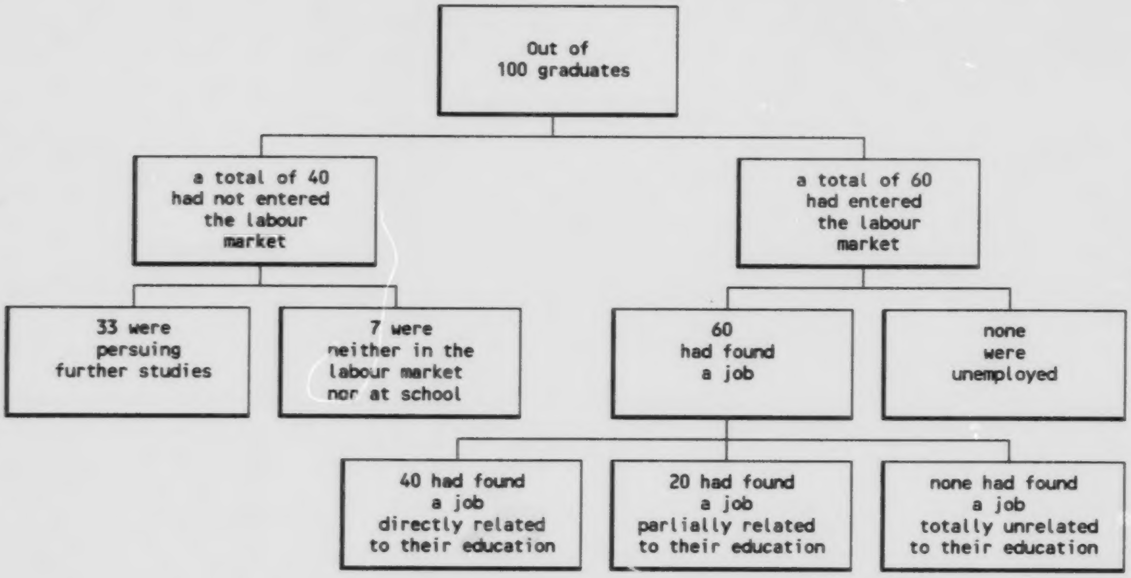
Few changes in job opportunities are expected over the coming years. Most will continue to be mainly in research in universities and similar institutions.

PHARMACY

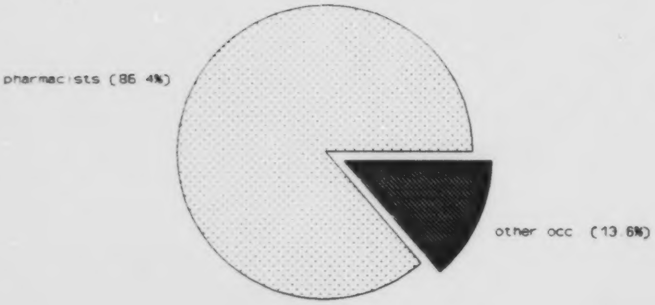
MEDICINE AND HEALTH

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 40 had not entered the labour market
a total of 60 had entered the labour market
33 were persuing further studies
7 were neither in the labour market nor at school
60 had found a job
none were unemployed
40 had found a job directly related to their education
20 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	185	0.9	0.8
1985/90	205	0.8	1.0
1990/95	225	0.9	0.9
1995/2000	225	0.9	0.9

BACHELOR'S DEGREE

This field of study encompasses medical pharmacy, pharmaceutics, hospital pharmacy and other specialties excluding pharmacology, which is classified in the group of basic sciences in medicine. Laval University and the University of Montréal offer programs in this field of study. Prerequisites are college courses in chemistry, biology, mathematics and physics.

Trends and projections

The number of graduates in these disciplines grew at the same rate as the number of graduates with bachelor's degrees in other disciplines. If this trend continues, the average annual number of graduates will be 225 in the 1990s.

Occupation after graduation

A greater than average proportion of graduates were continuing their education two years after graduation. The placement rate in occupations related to education was very high among those who had decided to enter the labour market.

Occupational profile

According to the 1988 survey of graduates, more than 85% of graduates who were employed two years after graduation were working as pharmacists.

Salary

Among survey respondents working full time two years after graduation, average salary was 30% higher than that for all graduates taken together. In 1988, it was $34,600 annually.

General picture

Given the high placement rate and salary level, the labour market for these graduates seems to have offered better than average job opportunities during the past few years. Similar trends in number of graduates and labour requirements during the second half of the 1980s helped to improve access, which was already excellent. Proportionately, more graduates in this field of study were satisfied with their academic choice.

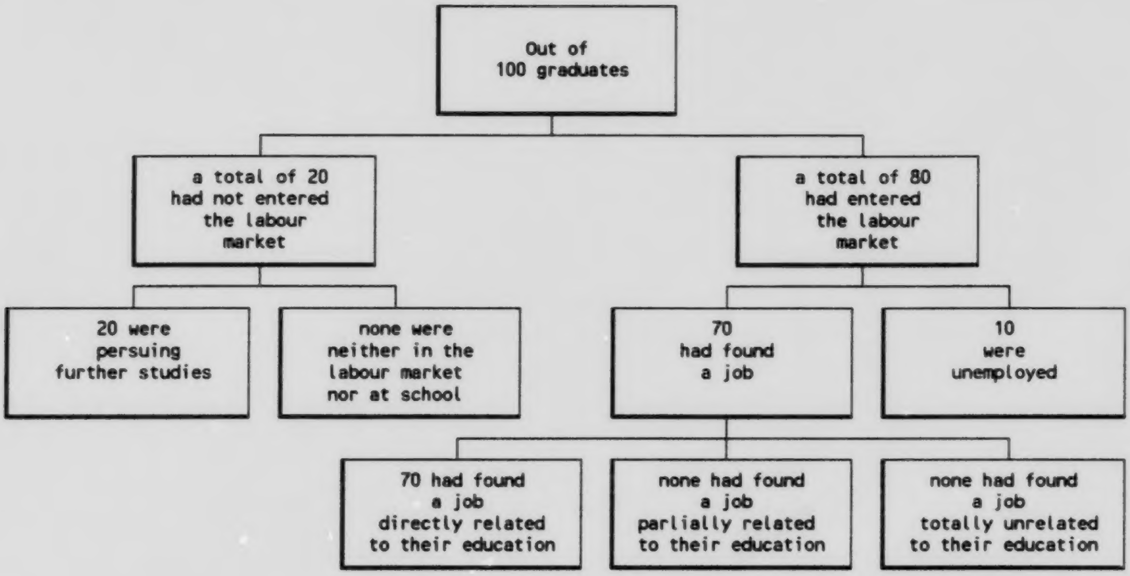
Trends in requirements for the group of pharmacists should absorb the expected increase in number of graduates during the 1990s, thereby maintaining job opportunities at their current levels.

REHABILITATION

MEDICINE AND HEALTH

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of
100 graduates

a total of 20
had not entered
the labour
market

a total of 80
had entered
the labour
market

20 were
persuing
further studies

none were
neither in the
labour market
nor at school

70
had found
a job

10
were
unemployed

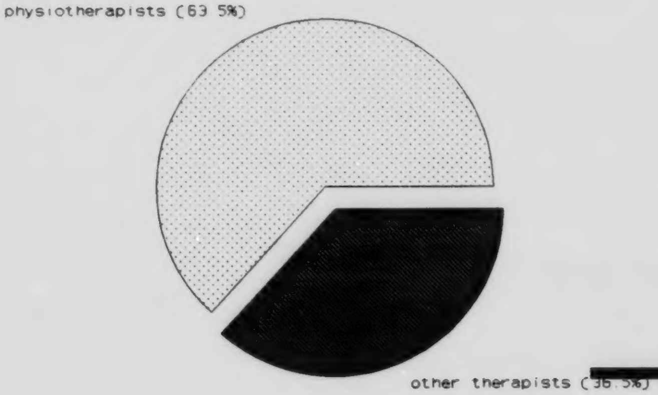
70 had found
a job
directly related
to their education

none had found
a job
parlially related
to their education

none had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	280	1.2	1.3
1985/90	315	1.3	1.0
1990/95	325	1.3	0.8
1995/2000	325	1.3	1.0

REHABILITATION

BACHELOR'S DEGREE

This field of study encompasses occupational and physical therapy. These two programs of study are offered by Laval, McGill and Montréal. The prerequisites are college courses in mathematics, physics, chemistry and biology.

Trends and projections

The number of these graduates as a proportion of all graduates with bachelor's degrees has remained constant over the 1980s. If this proportion stays the same during the 1990s, approximately 325 students a year will graduate in this field of study from the various Quebec universities.

Occupation after graduation

A percentage comparable to the average for bachelor's degrees were employed two years after graduation. Most jobs were directly related to education. Despite these positive indicators, the unemployment rate among these graduates was still above average.

Occupational profile

The occupation profile of employed graduates corresponded closely to education; all employed respondents to the 1988 survey were working as either physical or occupational therapists.

Salary

The average salary of survey respondents working full time was close to the average for all graduates. It was $25,600 annually in 1988.

General picture

Less rapid growth in labour requirements coupled with an increase in the number of graduates led to more difficult labour market entry during the second half of the last decade. Job opportunities were still slightly better than average, however, when compared with those facing graduates with bachelor's degrees taken as a whole. These favourable conditions explain their satisfaction with their education, which is reflected by the high proportion of these graduates who said they thought they had made the right academic choice.

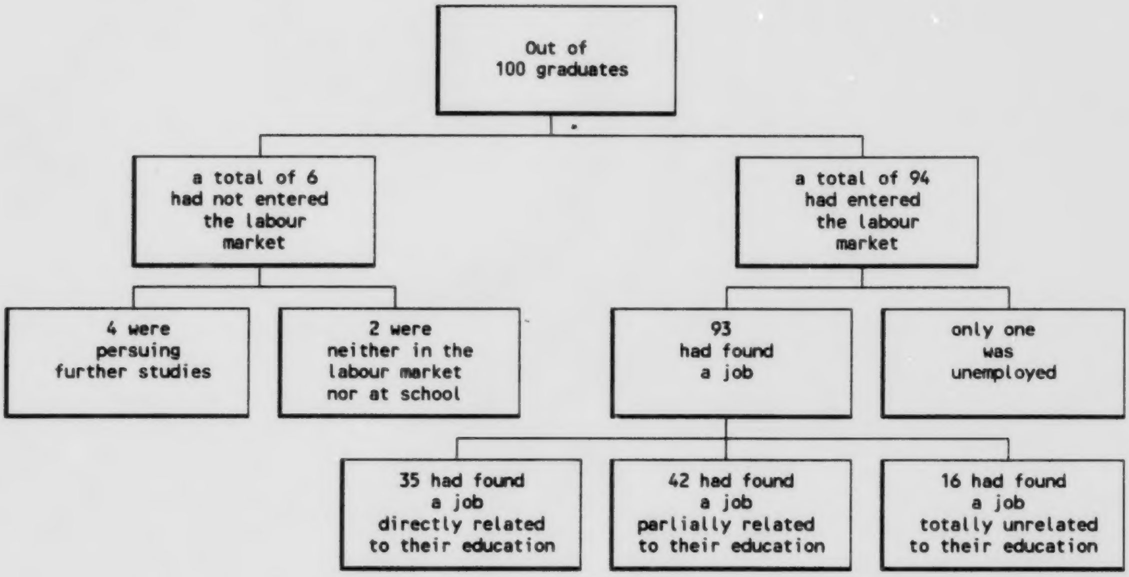
During the coming years, job opportunities will continue to decline somewhat over the medium term and then improve during the second half of the 1990s, since stronger pressure on employment growth is expected. Overall, these graduates should continue to enjoy a labour market offering average job opportunities over the short and medium term, with improvements over the long term.

OTHER HEALTH SCIENCES

BACHELOR'S DEGREE

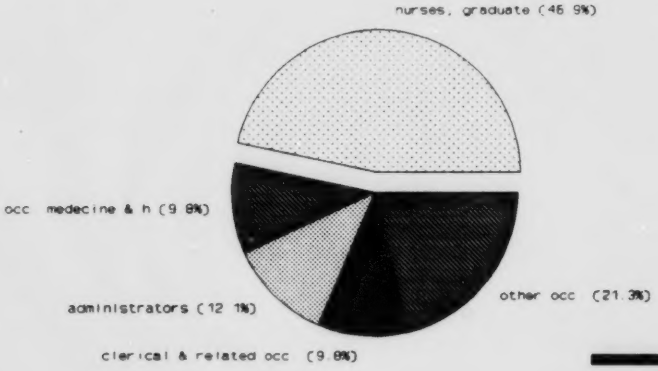
MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates
a total of 6 had not entered the labour market
a total of 94 had entered the labour market
4 were persuing further studies
2 were neither in the labour market nor at school
93 had found a job
only one was unemployed
35 had found a job directly related to their education
42 had found a job parlially related to their education
16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	120	0.5	1.0
1985/90	150	0.6	1.0
1990/95	150	0.6	0.9
1995/2000	150	0.6	1.1

OTHER HEALTH SCIENCES

BACHELOR'S DEGREE

Other health sciences include specialties in optometry, audiology, speech therapy, bacteriology, public health, epidemiology and so forth. Different programs leading to degrees in these disciplines are offered by faculties of medicine, optometry and health care administration at all three levels of university education. The University of Montréal offers a professional degree in optometry. A master's degree is required to practise as a speech therapist/audiologist. Prerequisites vary depending on university and program.

Trends and projections

During the 1980s, the number of graduates in this discipline grew at the same rate as all disciplines taken together. If this trend continues over the coming decade, an average of 100 students will graduate annually.

Occupation after graduation

According to the 1988 survey of graduates, a higher than average percentage of graduates had entered the labour market two years after graduation. The link between education and work seemed very close, since 99% of jobs were at least partially related to field of study. Among optometry graduates, the placement rate was even higher and the link more direct.

Occupational profile

Nearly 80% of graduates employed two years after graduation were working in the health care sector. The occupational group of optometrists was most frequent, accounting for more than 45% of jobs. The audiologists (15%) and physiotherapists (8%) groups were also strongly represented.

Salary

In 1988, the average annual salary of graduates working full time two years after graduation was $43,500.

General picture

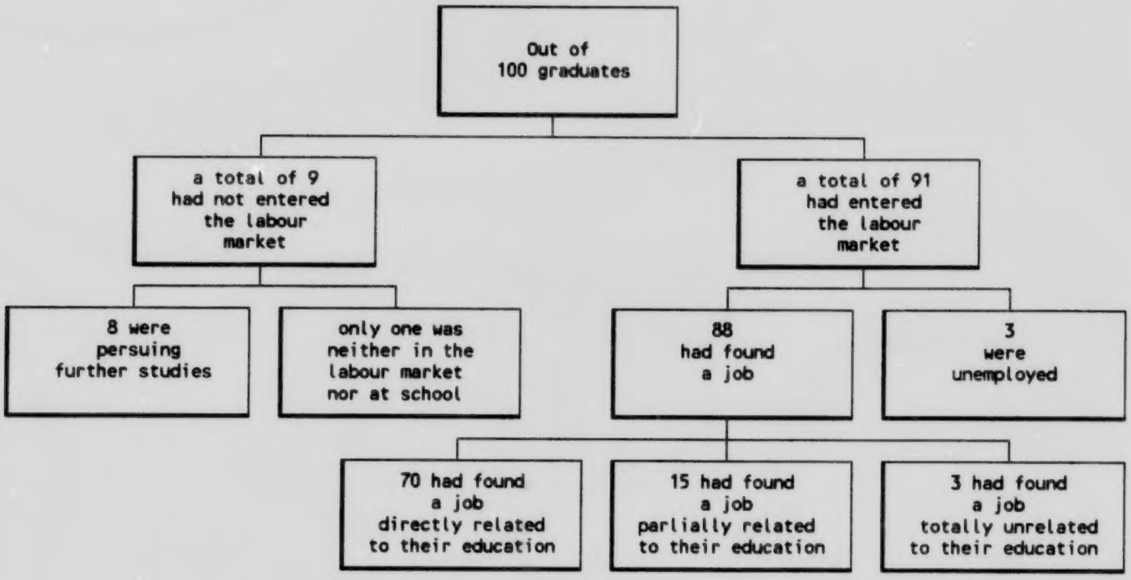
These graduates were faced with a labour market offering better than average job opportunities. This favourable situation should persist throughout the coming decade, even though a slight tightening of the market is expected.

HEALTH SCIENCES

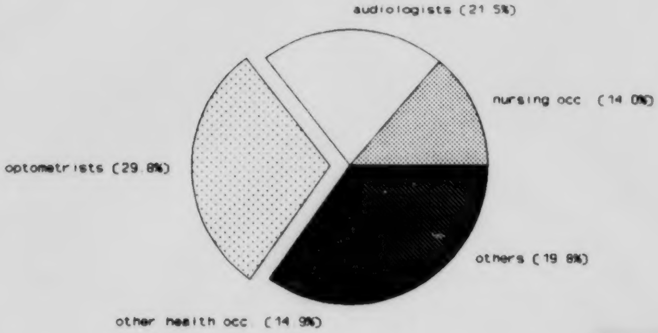
MEDICINE AND HEALTH

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 9 had not entered the labour market
a total of 91 had entered the labour market
8 were persuing further studies
only one was neither in the labour market nor at school
88 had found a job
3 were unemployed
70 had found a job directly related to their education
15 had found a job partially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	155	3.8	1.3
1985/90	245	4.8	1.0
1990/95	230	4.8	0.9
1995/2000	210	4.8	1.2

HEALTH SCIENCES

MASTER'S DEGREE AND DOCTORATE

This field of study includes graduate programs in anatomy, medicinal chemistry, epidemiology, occupational and environmental health, nursing, optics, orthodontics, speech therapy and audiology, pathology, radiology, rehabilitation, community health and virology.

Trends and projections

The popularity of this broad field of graduate studies has increased over the past 10 years; showing a rise from 4% to 5% in annual number of graduates. If this proportion remains the same, an average of 210 to 230 degrees should be granted annually over the coming decade.

Graduates' labour market participation

The vast majority of graduates in these disciplines enter the labour market. The placement rate of 96% was one of the highest. At the same time, most of the jobs found were closely related to education. While 60% of jobs held by graduates with master's degrees and doctorates as a whole had a direct link with education, the percentage was 80% in this case.

Occupational profile

According to the 1988 survey of 1986 graduates, the major group of health care occupations accounted for 80% of jobs held by these graduates. Optometrists (30%), audiologists (20%) and registered nurses (10%) were the largest groups.

Salary

In 1988, the average annual salary of graduates working full time two years after graduation was $41,200, higher than the average for graduates as a whole ($37,400). Large differences were observed between the various specialties, however. The annual salary in the nursing sciences category was $36,800; and in rehabilitation, $34,500.

General picture

With an unemployment rate half that of other graduates with advanced degrees, a participation rate of 96%, and a very close link between education and job, these graduates are facing labour market prospects markedly better than the average.

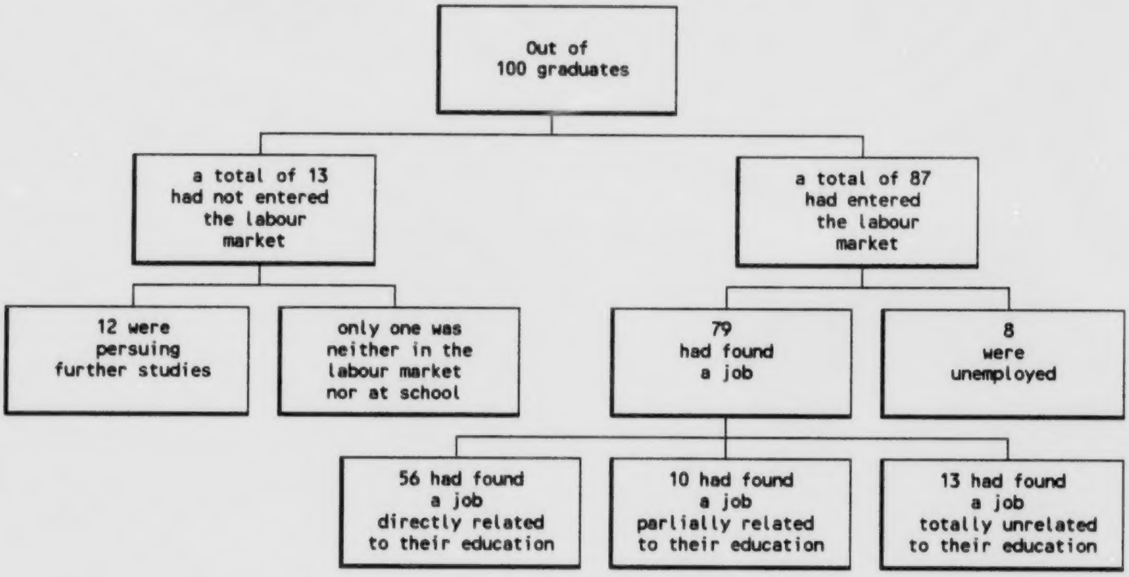
Since demand is expected to continue growing in the health sector, labour market prospects for these graduates should remain above average throughout the decade.

HEALTH SERVICES

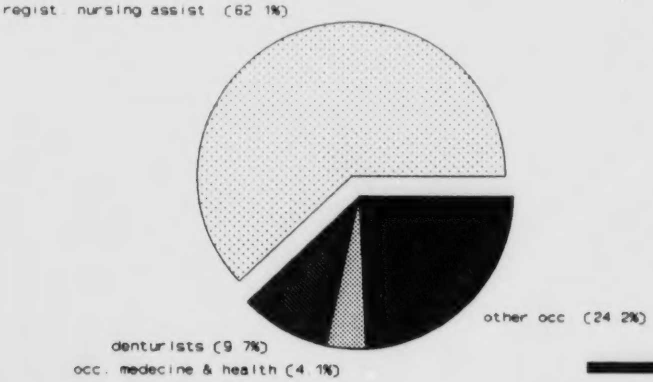
MEDICINE AND HEALTH

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 13 had not entered the labour market
a total of 87 had entered the labour market
12 were persuing further studies
only one was neither in the labour market nor at school
79 had found a job
8 were unemployed
56 had found a job directly related to their education
10 had found a job parlially related to their education
13 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	855	2.9	0.6
1985/90	580	5.0	1.0
1990/95	675	7.1	0.9
1995/2000	705	7.1	0.9

HEALTH SERVICES

SECONDARY VOCATIONAL

This field of study comprises only the two programs for nursing assistants and dental assistants.

Trends and projections

As in health sciences at the college level, the number of graduates in this field of study has diminished substantially over the 1980s. In fact, from more than 850 at the start of the last decade, this sector trained fewer than 600 graduates in the second half of the 1980s. However, this level is expected to increase slightly over the next few years. The health services sector is very popular with women, who account for more than 80% of the enrolment.

Occupation after graduation

Nearly 80% of the graduates succeeded in finding a job, a significantly higher rate than the two-thirds for secondary vocational graduates taken as a whole. Although four out of five jobs were related to education, the proportion of part-time and temporary jobs was very high, each category accounting for 40% of the jobs obtained.

Occupational profile

This field of study trains students for a limited number of occupations. Three-fifths of employed graduates held positions as assistant nurses and about 10% were working as dental hygienists or dental assistants. A large proportion of students found a job related to their specialty since three-quarters of the employees were working in the general health-care and social services sector.

Salary

In addition to providing good job prospects, this field of study enabled graduates to earn an average salary of $14,300, a higher salary level than the $13,600 earned by secondary vocational graduates taken as a whole.

General picture

Whether at the secondary, college or university level, disciplines in the health sector all offer better-than-average opportunities for entering the labour market. These disciplines are also quite well integrated into the different levels of training so that, after entering the labour market, secondary-school candidates can aspire to graduate nursing positions by completing a complementary college program.

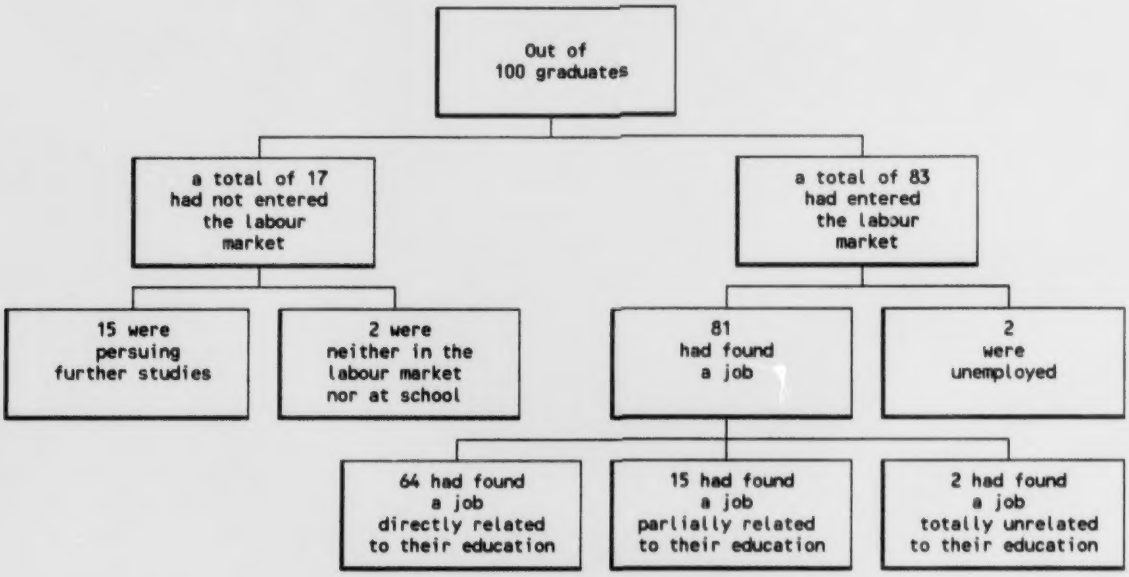
Over the next few years, demand for assistant nurses will continue to be steady, thus helping to maintain the current level of job prospects.

NURSING TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation



Out of 100 graduates

a total of 17 had not entered the labour market

a total of 83 had entered the labour market

15 were persuing further studies

2 were neither in the labour market nor at school

81 had found a job

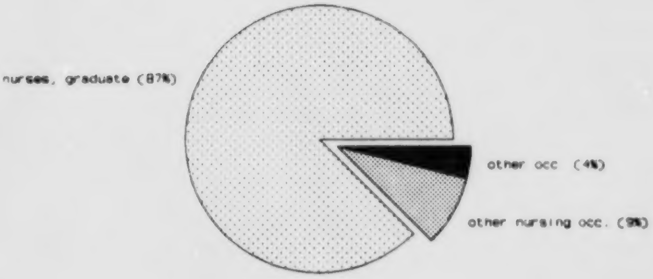
2 were unemployed

64 had found a job directly related to their education

15 had found a job parlially related to their education

2 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1745	12.1	1.0
1985/90	1535	10.8	1.0
1990/95	1400	11.0	1.0
1995/2000	1460	11.0	1.1

NURSING TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

The program of study in nursing sciences at the college level is available in all Quebec regions. An abridged five-term program is also available to secondary school graduates wishing to complete their education in order to be eligible for graduate nursing positions. To enter nursing, candidates must pass the examination of the Order of Nurses of Quebec.

Trends and projections

Although they are among the most popular occupational choice at the college level, with the third largest number of graduates, nursing sciences recorded a significant drop in popularity throughout the 1980s. In 1977, not less than 22% of the students who graduated in the vocational college sector were in this discipline. This proportion fell from 16% in 1980 to 11% 1988. Even more significant is the fact that this decline translated into an actual drop in the number of graduates which during the same period fell from 2,400 to 1,600 annually. Because of the drop in the number of young people likely to pursue college-level studies, this downward trend in the number of graduates should continue into the next decade, even if the relative portion of the past few years is maintained. If the decline in popularity continues, it will be a much more significant one than the data on the preceding page suggests.

Occupation after graduation

While the proportion of graduates entering the labour market immediately after completing their studies is comparable to the average for the vocational college sector, their placement rate is much higher. According to the 1988 Relance Survey, not less than 96% of nursing sciences graduates active on the labour market one year after graduation held a job. This job was, in a proportion of close to 80%, directly related to education and, in another 17% of cases, partially related to education. Thus, in all, 97% of the jobs obtained had at least a partial relation to education. This result is more positive by far than that of the vocational college graduates taken as a whole.

Occupational profile

Health-care jobs accounted for 97% of the positions held by these graduates one year after they completed their studies. The group of graduate nurses alone accounted for 87% of these jobs.

Salary

The average annual salary of respondents to the survey who were working full time was $22,300 in 1988. This salary level placed these graduates in the category of best-paid workers at the college level.

General picture

The decline in the number of enrolments in this discipline has resulted in a significant shortage of nurses on the market and has made entry into the labour market easier. This desertion has a lot to do with work conditions which are considered difficult in the hospital milieu. In particular, evening, night and weekend work as well as part-time and temporary jobs are frequent.

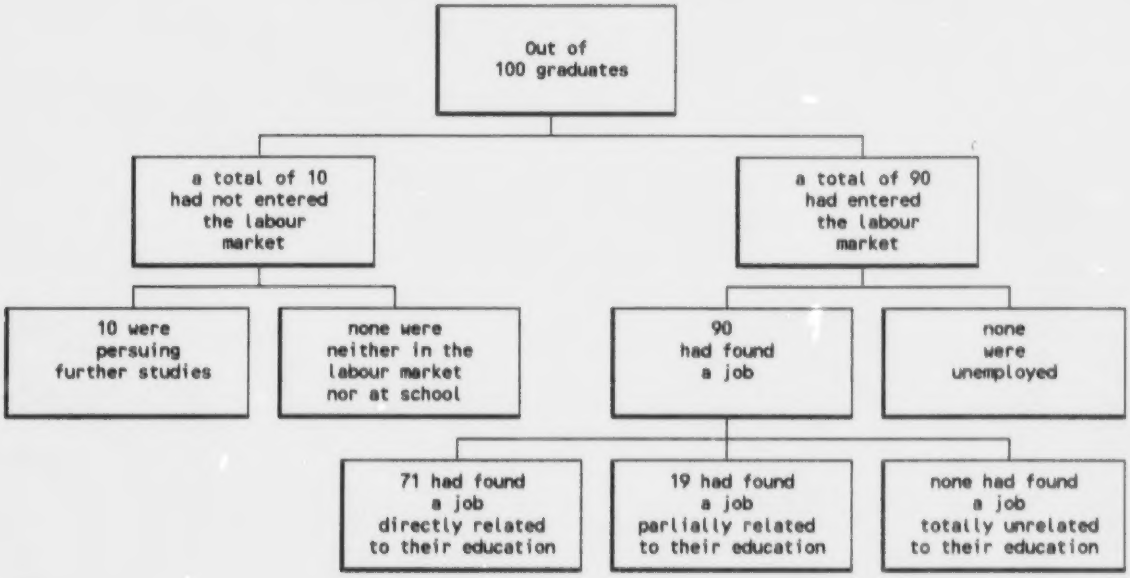
Over the next few years, opportunities for entering the labour market should remain good, while the general picture indicates that shortages of graduate nurses will continue.

NURSING

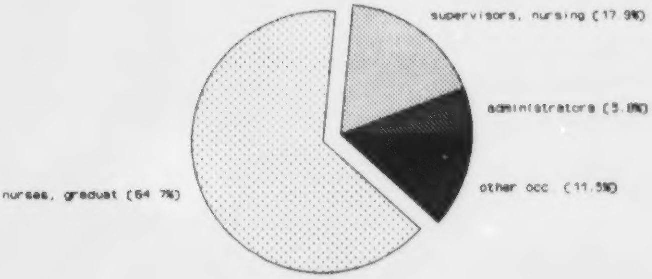
MEDICINE AND HEALTH

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 10 had not entered the labour market
a total of 90 had entered the labour market
10 were persuing further studies
none were neither in the labour market nor at school
90 had found a job
none were unemployed
71 had found a job directly related to their education
19 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	360	1.6	1.4
1985/90	630	2.5	1.0
1990/95	675	2.6	0.9
1995/2000	675	2.6	1.0

NURSING

BACHELOR'S DEGREE

This field of study includes such specialties as care of the disabled, geriatric, obstetric and pediatric nursing, and public health nursing. Laval, McGill and Montréal, as well as most of the campuses of the University of Quebec, offer programs in one or another of these disciplines. Admission requirements vary, but a college diploma in nursing and some work experience are generally required.

Trends and projections

The popularity of this field of study increased markedly in the 1980s. From 250 graduates in 1980, the number had reached more than 600 in 1989. This rise can be explained in large part by the desire of many nurses to improve their working conditions by being promoted to more senior or specialized positions. During the 1990s, the number of graduates is expected to remain high, but not increase at such a fast rate. An average of 675 nurses are expected to graduate each year during the next decade.

Occupation after graduation

An above average proportion of graduates enter the labour market after graduation. There is a closer link between education and work than the average.

Occupational profile

The nursing occupations account by far for the greatest number of jobs. According to the graduate survey, 65% of these are jobs as registered nurses and nearly 20% as head nurses.

Salary

The average annual salary of respondents to the 1988 survey was $32,600. This is 20% higher than the average for graduates with bachelor's degrees taken as a whole.

General picture

The above information points to labour market entry conditions more favourable than the average for graduates with first degrees, in terms of both placement and salary. This can be explained in part, however, by the fact that most of these graduates have previous work experience in their chosen field, unlike graduates in other disciplines. Moreover, the recent shortage of registered nurses means easier access. An above average proportion of these graduates said they would make the same academic choice.

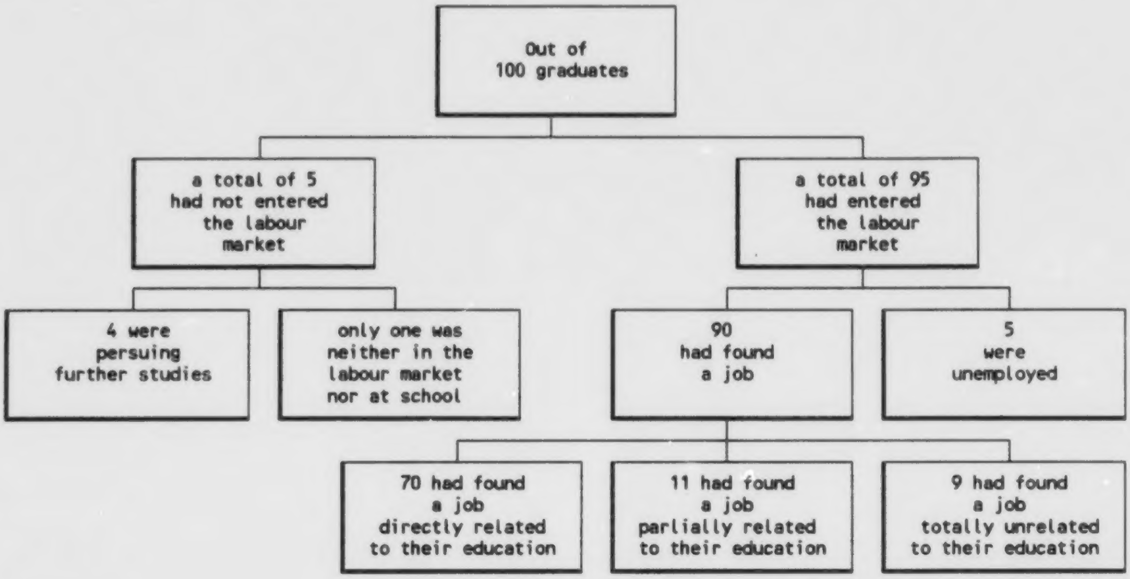
During the 1990s, these graduates will continue to enjoy job prospects better than the average for graduates with bachelor's degrees, since indications are that the shortages will persist, at least locally.

MEDICAL LABORATORY TECHNOLOGY

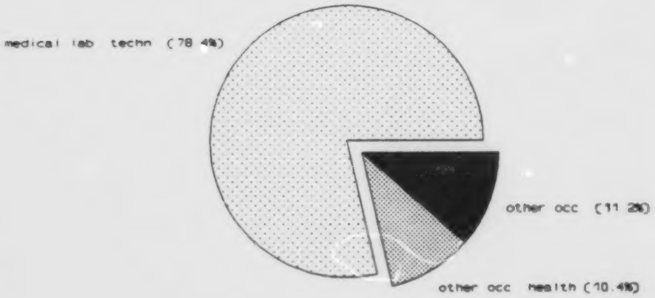
MEDICINE AND HEALTH

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 5 had not entered the labour market
a total of 95 had entered the labour market
4 were persuing further studies
only one was neither in the labour market nor at school
90 had found a job
5 were unemployed
70 had found a job directly related to their education
11 had found a job parlially related to their education
9 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	200	1.4	0.8
1985/90	190	1.3	1.0
1990/95	180	1.4	0.8
1995/2000	185	1.4	1.0

MEDICAL LABORATORY TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

This program of study is available in eight out of twelve regions. Only the Abitibi, North Shore, Gaspé and Outaouais regions were not offering this program in 1989-90.

Trends and projections

Like most health-related technologies at the college level, the popularity of this field saw a marked decline over the last decade. Representing nearly 3% of graduates in the vocational college sector at the end of the 1970s, these graduates accounted for only 1.4% of the total ten years later. The drop in popularity has nevertheless stabilized somewhat since 1986, the year in which the lowest point was reached with barely 1% of vocational college students graduating in this discipline. If this discipline maintains its current popularity, between 160 and 180 students are expected to graduate over the next decade.

Occupation after graduation

With a placement rate of the order of 95%, it is not surprising to note the very high proportion of graduates who entered the labour market immediately after completing their studies. About 75% of respondents to the Relance Survey indicated that they performed duties directly related to their education, representing a clearly greater than average proportion. However, a large number of the jobs obtained were part time in 40% of cases or on a temporary basis in 60% of cases.

Occupational profile

The direct nature of the relation between education and work is aptly reflected in the profile of the jobs obtained. Thus, 78% of employed graduates were working as medical laboratory technicians. Other occupational groups in the area of health such as prosthetists, orthotists and electrocardiography and electroencephalography technicians also provided a means of entry into the labour market. The health and social services sector is, naturally, the main employer of these graduates since nearly 85% of those who held jobs were working in this sector.

Salary

The average annual salary of respondents to the 1988 Relance Survey who were working full time was $20,300. This salary level was nearly 15% higher than that of vocational college graduates taken as a whole.

General picture

Over the last few years, graduates in this discipline had far better opportunities for entering the labour force than most vocational college graduates and even university graduates with bachelor's degrees. The decline in the school population in this discipline has given rise to specialized labour shortages, which gives these graduates a marked advantage on the market. Even if numerous jobs are offered on a temporary basis, possibilities remain excellent in the longer term.

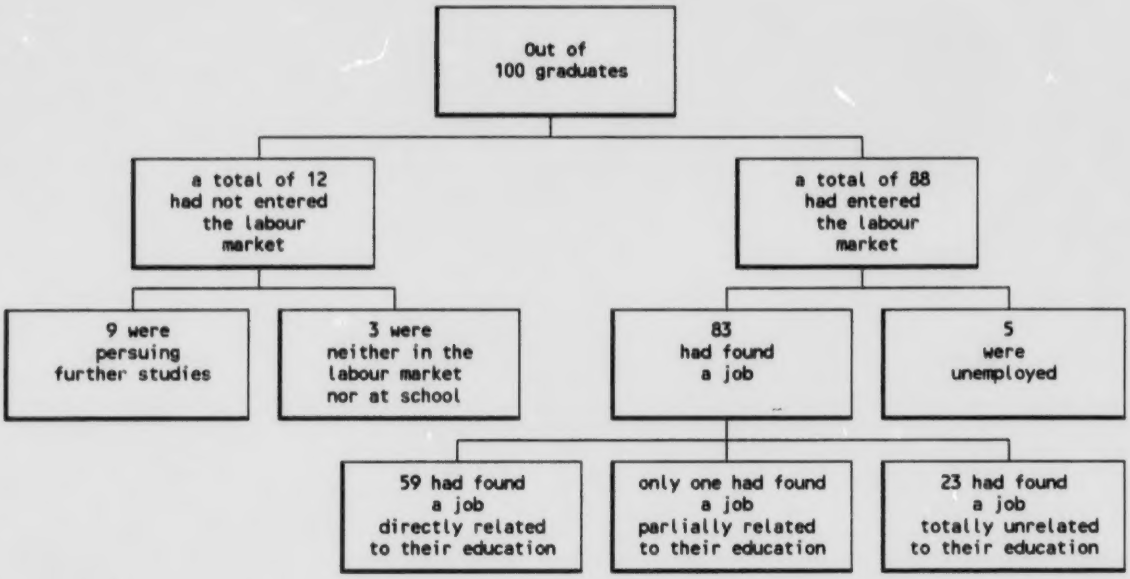
Over the next few years, the requirement growth for medical laboratory technicians is expected to benefit from the introduction of new diagnostic and treatment technologies. Given the expected drop in the college population, continued shortages of qualified labour are expected in this sector. The market outlook for these graduates should therefore remain better than average.

RADIOLOGY TECHNOLOGY

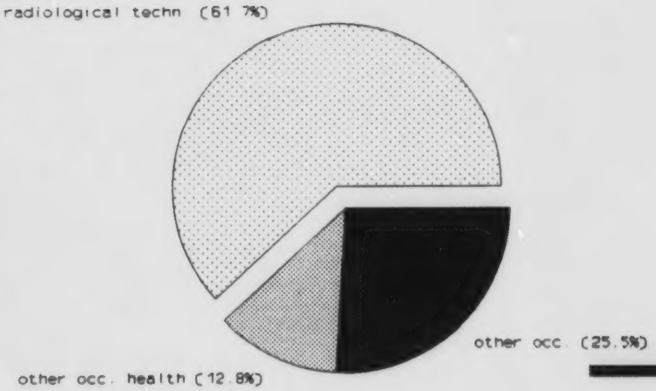
MEDICINE AND HEALTH

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
9 were persuing further studies
3 were neither in the labour market nor at school
83 had found a job
5 were unemployed
59 had found a job directly related to their education
only one had found a job parlially related to their education
23 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	150	1.0	0.1
1985/90	160	1.1	1.0
1990/95	135	1.1	1.0
1995/2000	140	1.1	1.2

MEDICINE AND HEALTH

RADIOLOGY TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses the specialties of radiodiagnosis, radiotherapy and nuclear medicine. These disciplines are offered in a limited number of college institutions, mainly in the Montreal and Quebec City regions.

Trends and projections

Although these disciplines experienced recruitment difficulties in the mid 1980s, the decline in the number of graduates has been less dramatic and sustained than that experienced in the nursing disciplines. The 150 students who graduated at the end of the last decade compares very favourably to the number of students who graduated in 1980. Over the next few years, between 130 and 140 students are expected to graduate each year if the discipline maintains its current popularity.

Occupation after graduation

Like all health science technologies, a higher than average number of graduates had entered the labour market one year after completing their studies. More than 65% of employed graduates had found a job that was at least partially related to their education. Although slightly lower than other health technologies, these results compared favourably to those obtained for most of the vocational college graduates.

Occupational profile

Nearly 75% of the jobs obtained by these graduates were directly related to health occupations. More particularly, the job of radiology technician was the most frequently encountered one year after graduation. In the case of graduates who were not working in the health sector one year after completing their studies, the secretarial and sales occupational groups constituted, as for other young people, the most frequent means of entry into the labour market.

Salary

The average annual salary of the graduates who were employed full time one year after graduation was $17,900. Although lower than that of other graduates in health technologies, it was nonetheless comparable to that of vocational college graduates taken as a whole.

General picture

Opportunities for entering the labour market in jobs directly related to education were higher than average in recent years. However, easier entry into the labour market was somewhat overshadowed by the fact that a large proportion of candidates had to accept jobs on a temporary or part-time basis at the beginning of their careers.

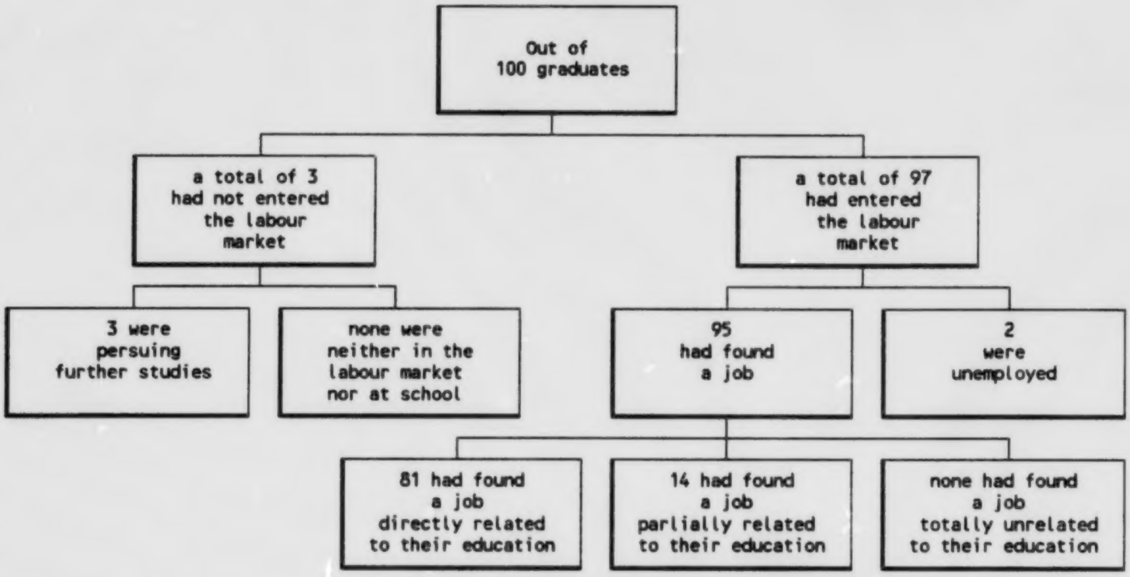
As for medical laboratory technicians, requirement growth for radiology technicians will continue to benefit from the development of diagnostic and treatment technologies. The general employment outlook for these graduates is expected to remain excellent.

DENTAL ASSISTANT TECHNOLOGY

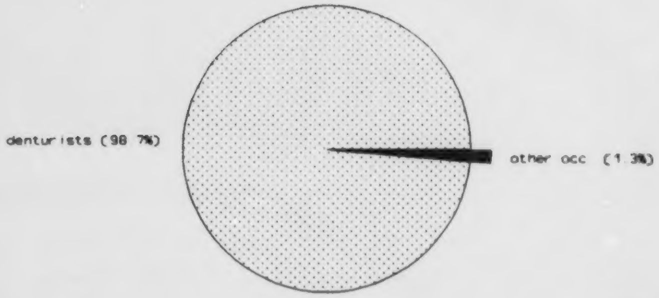
VOCATIONAL COLLEGE DIPLOMA

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 3 had not entered the labour market
a total of 97 had entered the labour market
3 were persuing further studies
none were neither in the labour market nor at school
95 had found a job
2 were unemployed
81 had found a job directly related to their education
14 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	130	0.9	0.9
1985/90	165	1.2	1.0
1990/95	155	1.2	1.1
1995/2000	160	1.2	1.1

DENTAL ASSISTANT TECHNOLOGY
VOCATIONAL COLLEGE DIPLOMA

The Montreal, Quebec City, Saguenay-Lac St-Jean, Montérégie, Mauricie-Bois-Francs and Outaouais regions all offer a dental hygiene program at the college level.

Trends and projections

After losing a certain amount of popularity at the beginning of the 1980s, this discipline recorded a slight recovery over the second half of the decade and saw its number of graduates increase over the last few years. Between 150 and 160 students will graduate each year during the next decade if the popularity of the last few years continues.

Occupation after graduation

A very large majority of these graduates enter the labour market immediately after completing their studies. According to the 1988 Relance Survey, the placement rate for these graduates one year after graduation was 98% and most of the jobs obtained were, according to the respondents, directly related to their education. Contrary to other health science graduates at the college level, very few of these graduates held part-time or temporary jobs.

Occupational profile

At the time of the survey, a large majority of respondents held jobs in the category of denturology, which includes hygienists and dental assistants.

Salary

The average annual salary of graduates in dental hygiene who were employed full time one year after graduation was $18,400 in 1988. This level is slightly higher than that of the vocational college sector.

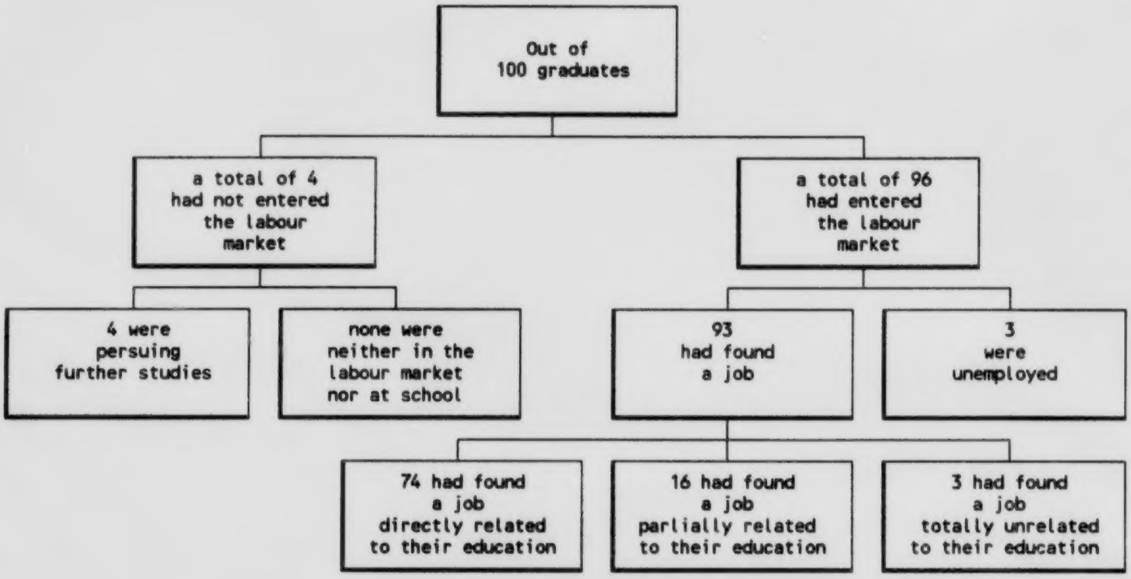
General picture

Opportunities for entering the labour market in jobs directly related to education are among the best at the college level. The exceptional placement rate in this discipline is a good indicator of shortages of qualified labour. These shortages are nonetheless partly attributable to the high turnover rate among these workers. Over the next few years, opportunities for entering the labour market should remain excellent. Graduates will nonetheless have to adjust to evening work, which is very frequent in this occupation.

OTHER DIAGNOSTIC TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 4 had not entered the labour market

a total of 96 had entered the labour market

4 were persuing further studies

none were neither in the labour market nor at school

93 had found a job

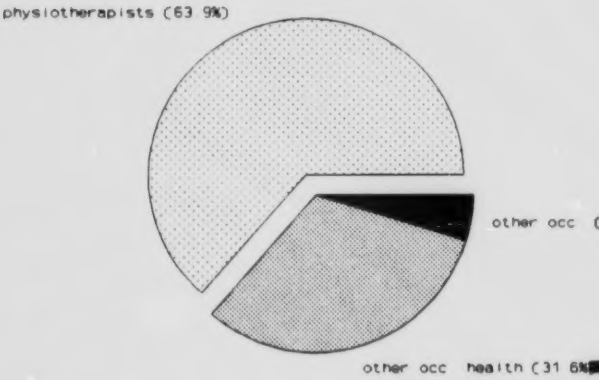
3 were unemployed

74 had found a job directly related to their education

16 had found a job parlially related to their education

3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	135	0.9	1.0
1985/90	150	1.1	1.0
1990/95	140	1.1	1.0
1995/2000	145	1.1	1.2

OTHER DIAGNOSTIC TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

The specialties offered in this discipline are respiratory and rehabilitation technologies. These programs are available primarily in certain institutions in the Eastern Townships, Montreal and Saguenay-Lac St-Jean regions.

Trends and projections

In the 1980s, the number of graduates in these disciplines remained more constant than that of other health technologies. If they maintain their relative importance in the vocational college sector, the annual number of graduates will be around 140 until the year 2000.

Occupation after graduation

Due to a very low unemployment rate compared to the average, most of these graduates enter the labour market immediately after completing their studies. According to the Relance Survey, less than 5% of these graduates were pursuing further studies one year after graduation, compared to 16% on average. Moreover, a much higher than average proportion of the jobs obtained are directly related to education. In fact, more than 97% of the employed graduates considered their duties at least partially related to their education. Nearly 80% of the jobs were full time, a greater proportion than in other health disciplines. However, temporary jobs were just as frequent.

Occupational profile

The occupational groups in the area of health accounted for at least 96% of the jobs held by these graduates. In this respect, the group of physiotherapists provided the most openings and accounted for 65% of the jobs.

Salary

The average annual salary of graduates who were working full time one year after graduation was about $21,500 in 1988. Although comparable to that of graduates in other health disciplines, it was clearly higher than that of vocational college graduates taken as a whole.

General picture

In the short term, employment opportunities for these graduates are among the most favourable, although shortages are noted in some regions. The unemployment rate in this field is very low and occupational mobility makes it easier for these young people to enter the occupation.

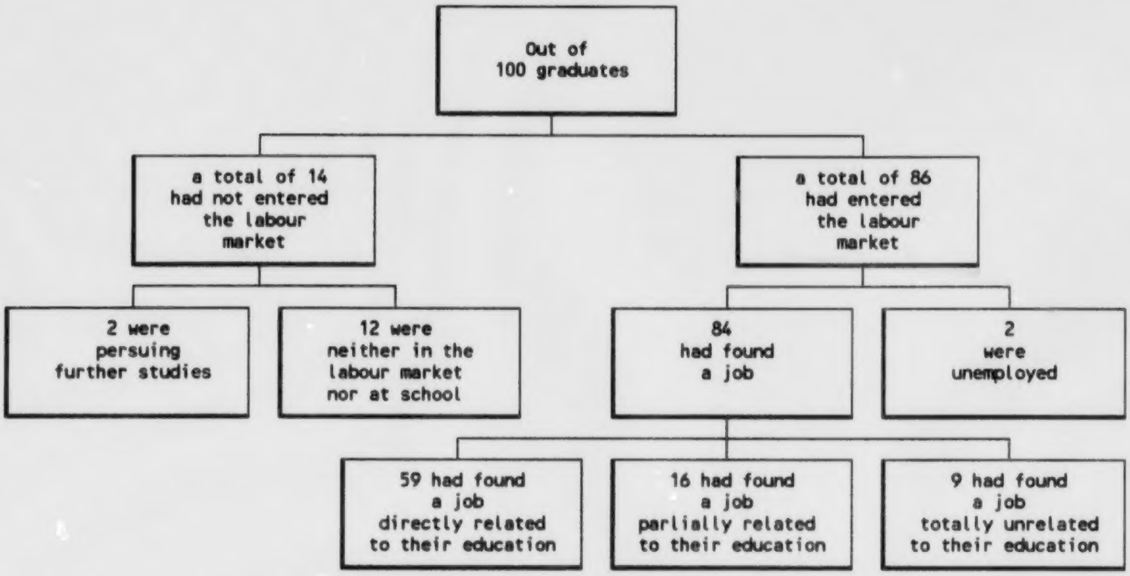
In the longer term, the high number of graduates and the more stringent constraints on the reimbursement of physiotherapeutic care by the Régime d'assurance-maladie du Quebec could cause the market to shrink somewhat for these professionals during the projected period. However, the outlook for respiratory assistance technicians remains good.

MEDICAL EQUIPMENT TECHNOLOGIES

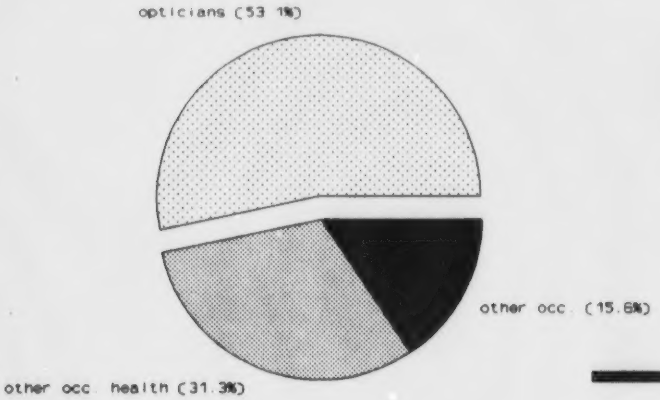
VOCATIONAL COLLEGE DIPLOMA

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 14 had not entered the labour market
a total of 86 had entered the labour market
2 were persuing further studies
12 were neither in the labour market nor at school
84 had found a job
2 were unemployed
59 had found a job directly related to their education
16 had found a job parlially related to their education
9 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	40	0.3	1.8
1985/90	45	0.3	1.0
1990/95	40	0.3	0.9
1995/2000	45	0.3	1.1

MEDICAL EQUIPMENT TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of training encompasses the specialization of hearing, seeing and dental prostheses and ortheses development. This training is offered in only a limited number of institutions in the greater Montreal region, namely the Edouard-Montpetit, Montmorency and Rosemont Cegeps.

Trends and projections

These technologies were not affected by the decline in the number of graduates as were other health-related disciplines. As in the last few years, an average of 40 to 50 students should graduate over the next decade.

Occupation after graduation

According to the Relance Survey, a proportionally lower number of graduates in this discipline pursued their studies after graduation, preferring instead to enter the labour force immediately. For a number of them, this decision was motivated by a high placement rate of 98% of the graduates who were active on the labour market. Although in a less direct fashion than for other categories of workers employed in any of the health sectors, the relation between education and work compared favourably to the average for all college disciplines. In fact, at least 90% of the graduates who were employed one year after completing their studies indicated that they were performing duties that were at least partially related to their education. In most cases, the jobs obtained were permanent and full time.

Occupational profile

Nearly 90% of graduates who were employed one year after graduation were working in the general group of health professionals. The group of dispensing opticians was the largest, accounting for 55% of the jobs obtained. The groups of prosthetists and orthotists, prostheses-ortheses technicians and ocularists accounted for 17% of the jobs reported by graduates.

Salary

The average annual salary of respondents to the survey who were working full time one year after completing their studies was $21,000 in 1988.

General picture

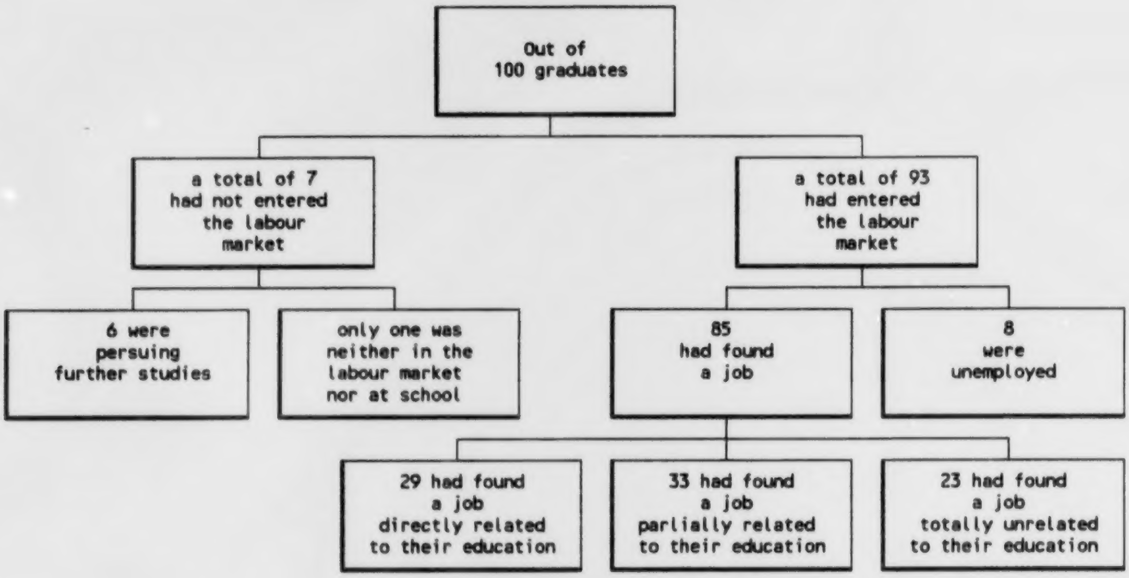
The rapid growth of "optometry clinics" combining eye tests and opticians' laboratories has given rise to a large number of openings for dispensing opticians over the last few years. For their part, other ortheses and prostheses professionals have benefited from significant technical development, whether with respect to new products or materials or the development of sports medicine which is increasingly expanding beyond the limits of elite sports.

Although a slowdown in the requirement growth for opticians is expected over the next few years, employment prospects in related occupations should remain higher than the average of other college disciplines.

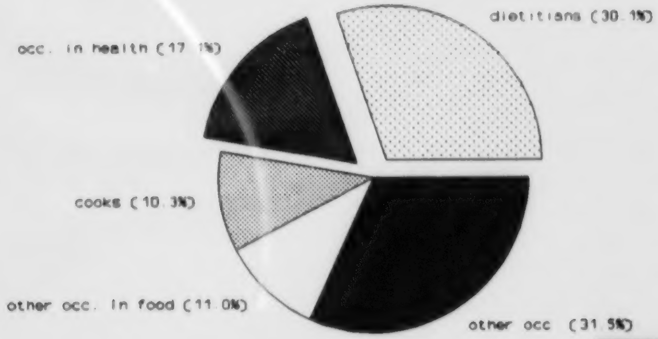
OTHER HEALTH TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

MEDICINE AND HEALTH

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
6 were persuing further studies
only one was neither in the labour market nor at school
85 had found a job
8 were unemployed
29 had found a job directly related to their education
33 had found a job parlially related to their education
23 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	185	1.2	1.0
1985/90	205	1.4	1.0
1990/95	185	1.5	1.0
1995/2000	195	1.5	1.2

OTHER HEALTH TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

Most of these graduates studied dietetic technology, a program available in seven out of twelve regions: Lower St. Lawrence, Laval-Laurentides-Lanaudière, Mauricie-Bois-Francs, Montérégie, Montreal, Quebec City and Saguenay-Lac St-Jean. Programs in cytotechnology and electrophysiology are also offered in the Montreal and Quebec City regions.

Trends and projections

The popularity of this field of training slipped at the beginning of the 1980s when the relative number of graduates decreased from 2% in 1977 to 1% in 1981. This trend reversed as of 1983-84 and the number of graduates reached 1.5% at the end of the decade. If the current trend continues over the next few years, some 190 students will graduate each year from the various college institutions.

Occupation after graduation

According to the 1988 Relance Survey, the placement outlook in related occupations was excellent. Thus, 91% of the graduates who chose to enter the labour force were employed in the following year. This placement rate compares favourably to that of university graduates in dietetic sciences. Although the jobs were less directly related to education than the jobs of their university colleagues, the proportion of related jobs was comparable to the average for the college level. However, quite a high proportion of part-time and temporary jobs were noted.

Occupational profile

The occupational profile of graduates in these disciplines is quite diverse. About 50% of these graduates (30% for dieticians) were employed in occupational categories in the health sector. A significant proportion, however, were working as chefs and cooks (10%). The food processing sector also provided employment opportunities for these graduates, notably as food inspectors and, to a lesser extent, as foremen/women or food-service supervisors.

Salary

The average annual salary reported by respondents to the 1988 Relance Survey who were working full time was $16,400. This level was slightly lower than the $17,700 average for vocational college graduates.

General picture

As noted in the occupational profile of these graduates, there is a certain amount of competition from university graduates. In this respect, college graduates managed quite well, and even entered the labour force in larger numbers than their university counterparts. Entry into the labour market requires a search for employment in very diverse sectors. In particular, hospitals, teaching institutions, daycare centres, food-processing plants, lodging and restaurant establishments should not be overlooked in the search for employment.

Over the next few years, the employment outlook for dieticians should shrink somewhat and a labour surplus is anticipated.

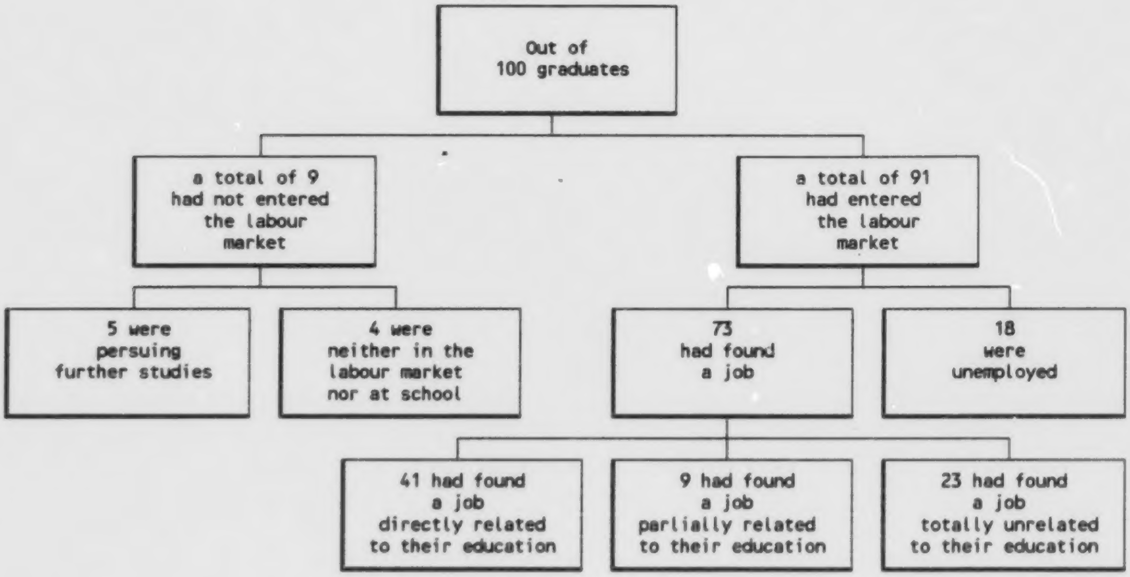
APPLIED SCIENCES

CARPENTRY

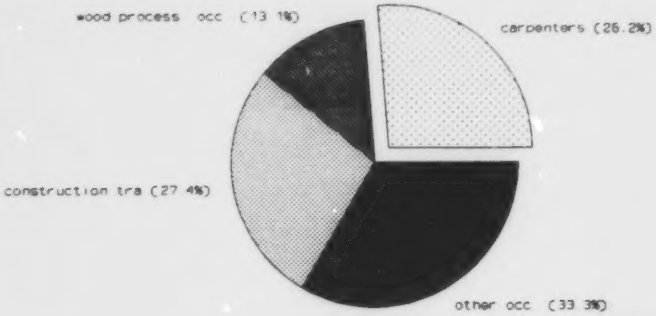
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 9 had not entered the labour market
a total of 91 had entered the labour market
5 were persuing further studies
4 were neither in the labour market nor at school
73 had found a job
18 were unemployed
41 had found a job directly related to their education
9 had found a job partially related to their education
23 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	255	0.9	0.1
1985/90	55	0.5	1.0
1990/95	35	0.4	0.7
1995/2000	35	0.4	0.1

CARPENTRY
SECONDARY VOCATIONAL

This field of study provides training for construction workers specializing in carpentry and woodworking.

Trends and projections

Although this field of study produced many graduates in the past, -more then 250 annually in the early 1980s - it has lost a great deal of popularity, as have many other secondary vocational fields of study. In recent years, there have been only about 55 graduates each year, a number which could fall even further in the short and medium term.

Occupation after graduation

The situation of these graduates on the labour market one year after graduation closely resembles the overall situation of secondary vocational graduates. The employment rate was 73% and two-thirds of the jobs obtained were directly or at least partially related to education. For the most part, graduates were working in permanent full-time jobs. Unemployment was nonetheless high among those who were in the labour force, reaching a rate of nearly 20%, the same level as that of secondary graduates taken as a whole.

Occupational profile

More than half of the graduates were working in jobs related to the construction sector, especially as carpenters, masons and unskilled workers. Another group of graduates, accounting for less than 15% of the jobs, were working in occupations related to the wood and furniture industries as cabinetmakers and workers.

Salary

At $17,800, the average annual salary of employed graduates is among the highest of all secondary vocational graduates who, overall, earned an average salary of only $13,600 in 1988.

General picture

The construction industry is marked by considerable cyclical variations. Demand for carpenters is largely dependent on residential construction which experienced a slump in 1989 and 1990, after the record years of 1986, 1987 and 1988. When interpreting placement statistics for these graduates it should be kept in mind that 1988 was a very favourable year for the residential construction industry. In this respect, graduates searching for first jobs in the 1990s could face a very competitive labour market.

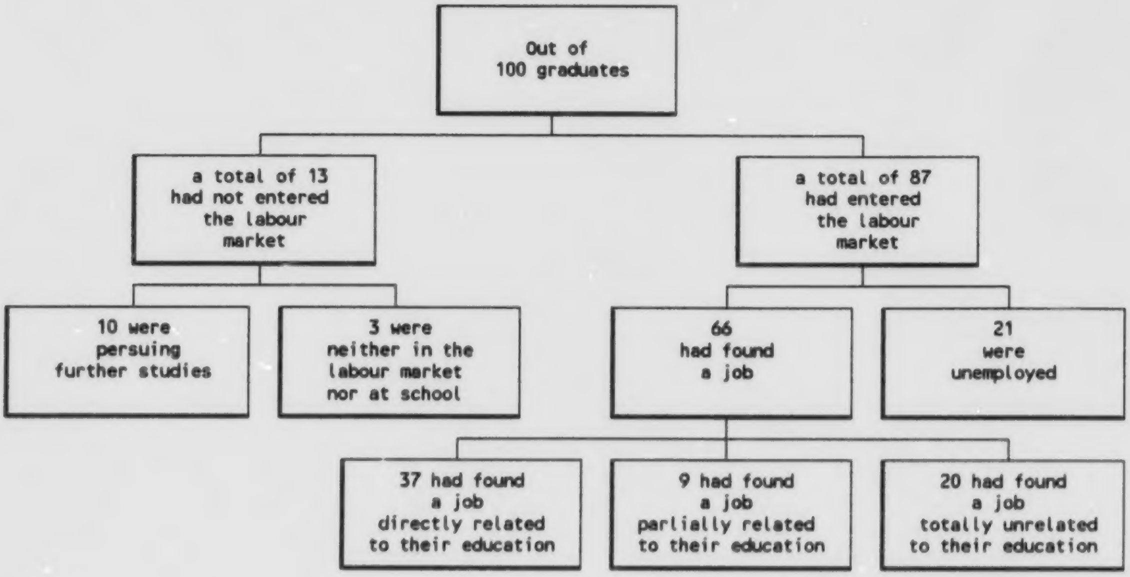
The high turnover rate in carpentry, however, makes it easier for new workers to enter the labour market. During the 1990s, entry of these graduates into the labour market should also be favoured by the new law governing construction trades which limits access to these occupations to candidates with vocational training.

ELECTRICITY

SECONDARY VOCATIONAL

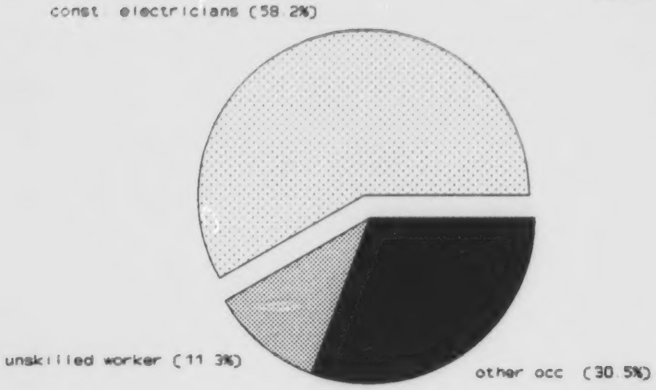
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 13 had not entered the labour market
a total of 87 had entered the labour market
10 were persuing further studies
3 were neither in the labour market nor at school
66 had found a job
21 were unemployed
37 had found a job directly related to their education
9 had found a job parlially related to their education
20 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	345	1.2	---
1985/90	90	0.8	---
1990/95	60	0.7	---
1995/2000	65	0.7	---

ELECTRICITY
SECONDARY VOCATIONAL

This vocational sector includes programs in construction electricity, industrial wiring maintenance, electrical drafting estimation and assembly of wiring installations.

Trends and projections

- Although very popular in past years, - nearly 350 graduates each year in the first half of the decade - disciplines in the field of electricity have recently lost much of their appeal so that, on average, just under 100 students have graduated each year during the 1985-1990 period. If the recent trend continues, this number could well drop even more over the next few years to reach an average of only 60 to 65 graduates annually.

Occupation after graduation

Two-thirds of the 1987 graduates were employed at the time of the 1988 survey and a little more than one-fifth were unemployed. One-third of the workers had decided to accept jobs that were unrelated to their education. Of the employed graduates, a significant proportion, i.e. 17%, held temporary jobs.

Occupational Profile

Most of the workers (58%) were working as mechanics. Another group, accounting for more than 10% of those employed, were working as unskilled workers in various industries. Overall, nearly three out of five employees were working in the construction sector.

Salary

Survey respondents reported an average annual salary of $18,200, the second highest salary level of all the graduate groups. Also, this salary is nearly $5,000 higher than that of secondary graduates taken as a whole.

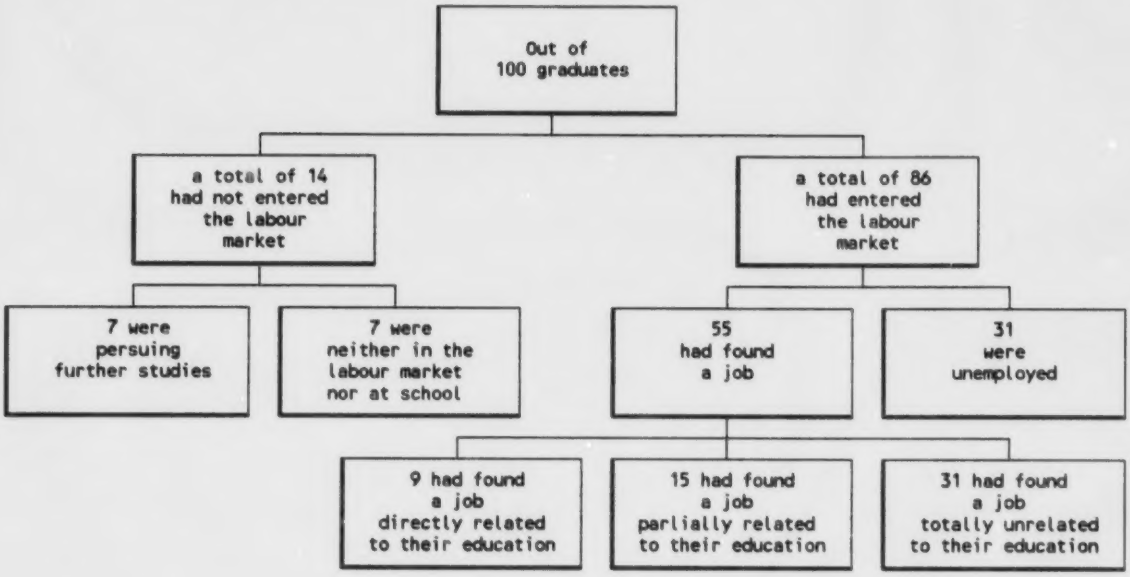
General picture

Compared to other construction occupations, the turnover rate among electricians is not as high and the average age is lower. These two factors combined largely explain the lower demand for these professionals. Despite everything, placement of graduates in related jobs was comparable to the average of secondary vocational graduates.

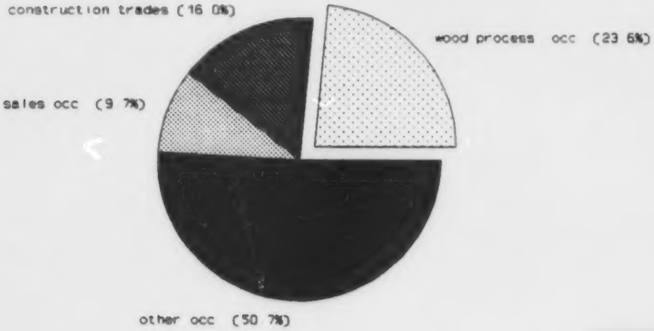
Over the next few years, graduates in this field should continue to enjoy employment opportunities comparable to those recorded in recent years. As in the 1980s, a large proportion of the demand will be for maintenance electricians outside the construction sector.

WOODWORKING **APPLIED SCIENCES**
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 14 had not entered the labour market
a total of 86 had entered the labour market
7 were persuing further studies
7 were neither in the labour market nor at school
55 had found a job
31 were unemployed
9 had found a job directly related to their education
15 had found a job parlially related to their education
31 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	375	1.3	0.1
1985/90	125	1.1	1.0
1990/95	85	0.9	0.4
1995/2000	90	0.9	0.5

SECONDARY VOCATIONAL

This field of studies trains shop carpenters, layout carpenters and prefabrication carpenters.

Trends and projections

Woodworking is among the fields of study which in the second half of the 1980s saw its number of graduates decrease by more than 250. The 120 students who graduate each year, however, account for slightly more than 1% of the total number of graduates from all the secondary vocational education programs.

Occupation after graduation

The 1988 Relance Survey paints a bleak picture of the market outlook for woodworkers who graduated in 1987. Barely more than half (55%) of them had found a job one year after graduation and about one-third were unemployed, a proportion almost double that of graduates taken as a whole. Moreover, one-half (55%) of the employed graduates were working in jobs that were not related to their education.

Occupational profile

Given that a high proportion of woodworking graduates hold jobs that have very little relation to their school training, their occupational profile includes a wide range of different occupations (more than 40) in a large number of economic sectors. About 40% of employed graduates were working as cabinetmakers or workers in the treatment or manufacturing and repair of woodwoork in various construction occupations, particularly as unskilled workers. Woodworking graduates' participation in a few different occupations is offset by the fact that 37% of employed graduates were working in the wood, furniture and construction sectors.

Salary

The salary of woodworking graduates reflected the difficult market conditions since they were earning a salary of $12,000, i.e. about $1,600 less than the average salary of secondary vocational graduates taken as a whole.

General picture

The placement situation for these graduates is among the poorest of the secondary vocational sector. The advanced mechanization of the manufacturing of furniture, kitchen cabinets as well as wood panelling, wainscotting and trim has certainly contributed to reducing demand for these professionals over the past few years. In this respect, candidates who are more familiar with automated woodworking machinery have a marked advantage in the labour market. Nonetheless, specialized jobs involving the installation of cabinets, windows or other types of woodwork appear to offer additional job prospects for these graduates.

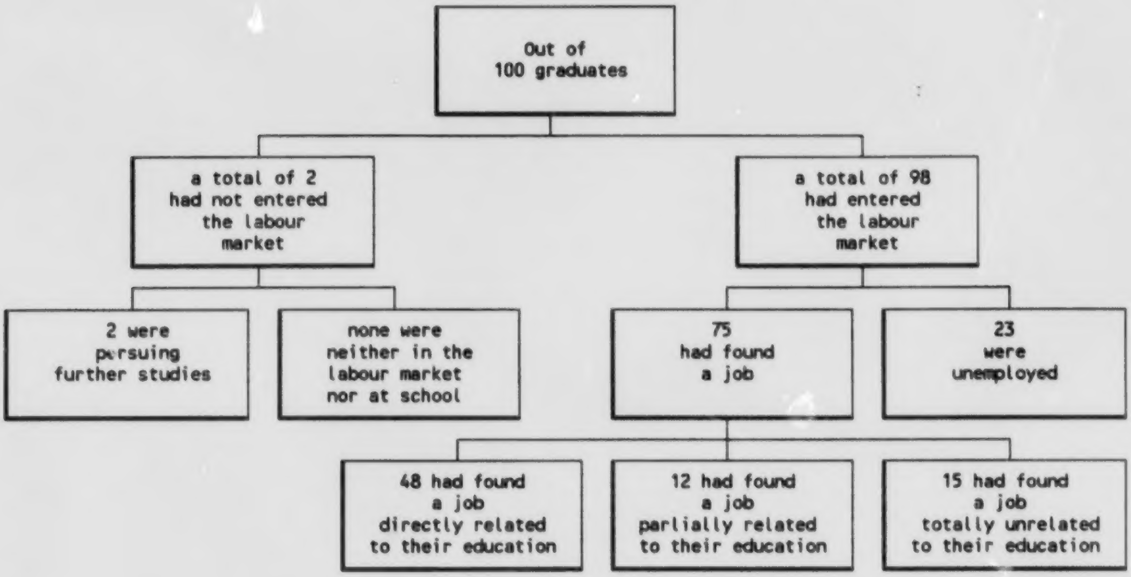
As for carpenters, demand for these workers tends to grow at the same rate as residential construction. After the high activity level of previous years, the number of construction projects undertaken in 1989 and 1990 dropped considerably. The level of construction activity is expected to rise during the first half of the 1990s, but still will not reach the record levels of 1986, 1987 and 1988.

PLUMBING AND HEATING

SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation



Out of 100 graduates

a total of 2 had not entered the labour market

a total of 98 had entered the labour market

2 were persuing further studies

none were neither in the labour market nor at school

75 had found a job

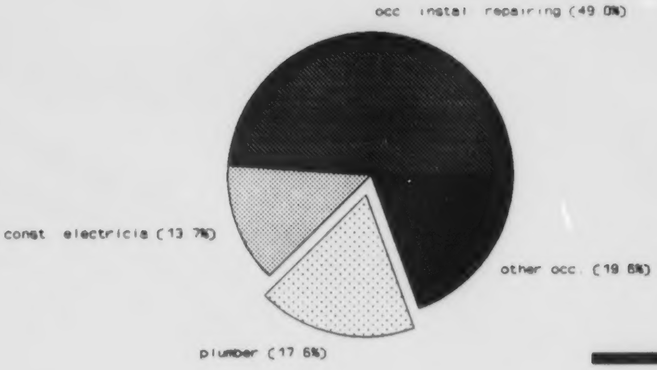
23 were unemployed

48 had found a job directly related to their education

12 had found a job parlially related to their education

15 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	105	0.4	0.1
1985/90	35	0.3	1.0
1990/95	25	0.2	0.8
1995/2000	25	0.2	0.4

This field of study includes training programs for plumbing and heating mechanics and helpers, pipefitters and installers and mechanics of refrigeration and air-conditioning units.

Trends and projections

This field of study has experienced more or less the same decline as all other secondary vocational disciplines by losing more than half its enrolment in the second half of the 1980s. Over the next ten years, the number of graduates should hover around an average of 25 per year.

Occupation after graduation

Graduates in the field of plumbing and heating recorded both an above-average employment rate (75%) and a slightly higher unemployment rate (23%) than graduates taken as whole. Four out of five workers found jobs with requirements that were directly or partially related to their vocational training. It should be noted that most of the jobs were full time and permanent.

Occupational profile

About half of the jobs were in the occupational groups of installers of electrical and electronic units, while another third were working as mechanics, plumbers or unskilled workers in the area of electrical equipment.

Salary

Although a complete range of the salaries earned is not available, the salaries of these workers varied between $14,000 for installers of heating units and $19,500 for electricians.

General picture

Like other graduates in disciplines related to the construction trades, these graduates should benefit over the next few years from the law reform concerning training in construction trades. Moreover, regular activity in non-residential construction has kept the demand steady for this category of workers. Finally, the inroads made by air-conditioning products into the residential market has greatly contributed to the creation of new job openings, often outside the construction sector per se.

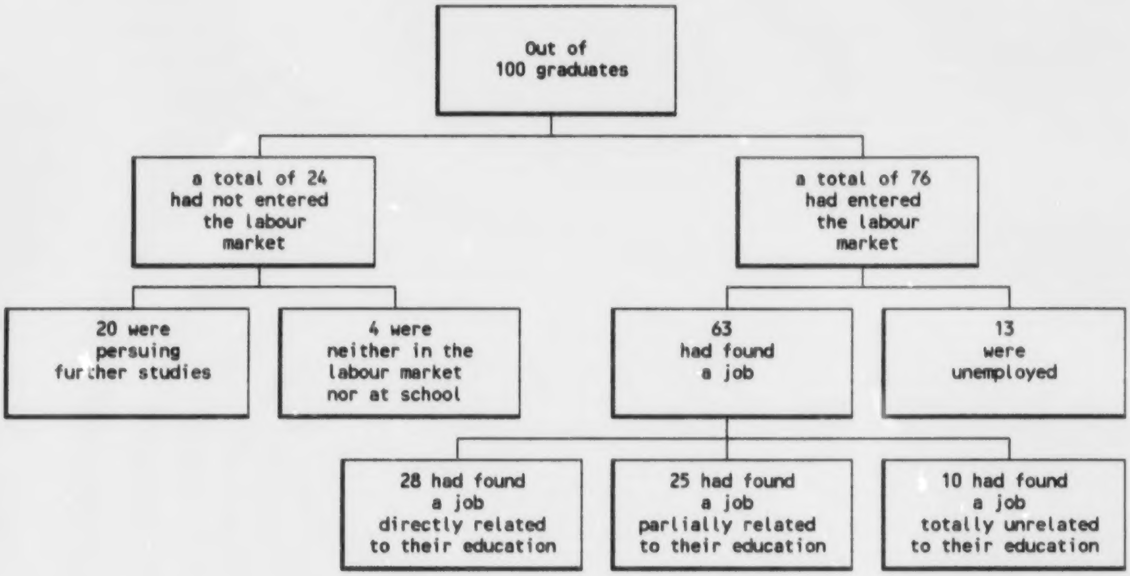
Over the next few years, the placement outlook in related trades is expected to remain above average.

CIVIL ENGINEERING TECHNOLOGIES

APPLIED SCIENCES

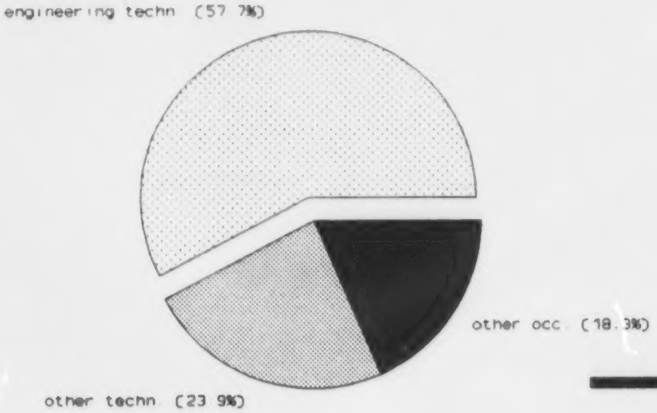
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 24 had not entered the labour market
a total of 76 had entered the labour market
20 were persuing further studies
4 were neither in the labour market nor at school
63 had found a job
13 were unemployed
28 had found a job directly related to their education
25 had found a job partially related to their education
10 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	345	2.3	0.1
1985/90	210	1.5	1.0
1990/95	180	1.4	0.8
1995/2000	190	1.4	0.7

CIVIL ENGINEERING TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

Although it is offered by a limited number of institutions, this field of training is available in most Quebec regions with the exception of the Montérégie, Gaspé and Outaouais regions.

Trends and projections

Although very popular in the early 1980s, the popularity of this field of training has declined dramatically since then. From over 3% in 1980, the relative proportion of graduates dipped to 1.9% in 1985 and to 1.4% in 1988. The number of graduates is expected to continue dropping over the 1990s to attain an average of 180 to 190 annually.

Occupation after graduation

A higher than average proportion of graduates decided to continue their studies after graduation. Of those who entered the labour force, the placement rate was 80%, a level lower than that noted for all the disciplines taken as a whole. The relation between education and work was comparable to the average but, given the lower than average participation and placement rates and the high incidence of temporary work, the jobs seemed more difficult to find.

Occupational profile

Nearly 80% of employed graduates were working as technicians, including 58% as engineering technicians, 7% as surveyors and 7% as designers. Compared to physical sciences technologies, entry-level jobs were clearly less related to production tasks. Nevertheless, companies in the manufacturing sector, particularly those involved in transport equipment, metal products, electrical products, paper and plastics provided 90% of the job openings.

Salary

The average salary of $17,500 in 1988 earned by graduates who were working full time one year after graduation was comparable to the average salary of vocational college graduates taken as a whole.

General picture

Statistics for this field of training, although not poor, indicate that these graduates face labour market conditions that are more difficult than the average noted for other engineering technologies. Concentration in a limited number of occupational groups appears to limit their opportunities somewhat, compared to the other engineering technologies.

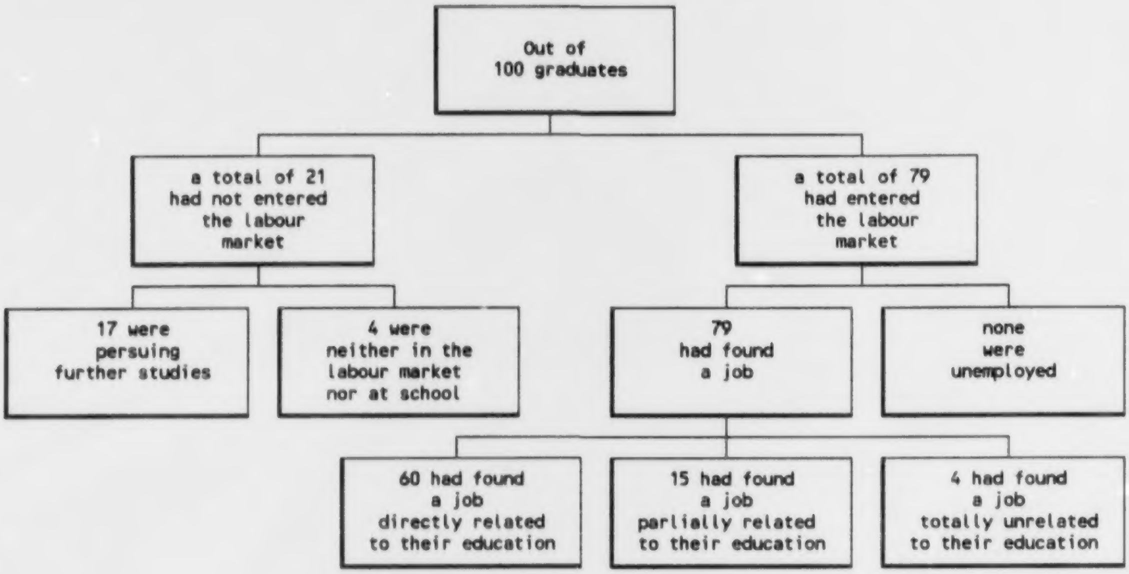
Over the next few years, a slight tightening of the labour market is expected in relation to that of recent years. This will serve to maintain job opportunities at a slightly lower than average level. Employment prospects should nonetheless continue to allow most future graduates to enter the labour market.

CIVIL ENGINEERING

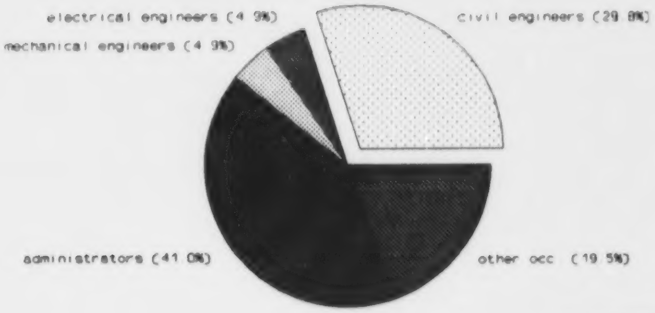
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
17 were persuing further studies
4 were neither in the labour market nor at school
79 had found a job
none were unemployed
60 had found a job directly related to their education
15 had found a job parlially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	305	1.4	0.5
1985/90	280	1.1	1.0
1990/95	300	1.2	0.8
1995/2000	300	1.2	0.7

CIVIL ENGINEERING
BACHELOR'S DEGREE

Programs in civil engineering are offered at Concordia, Sherbrooke, Laval and Polytechnique. The prerequisites are mathematics, physics, chemistry and biology, in addition to a Diploma of Collegial Studies or equivalent.

Trends and projections

In comparison with engineering disciplines taken as a whole, the popularity of civil engineering has been declining. While the number of graduates in engineering during the period 1985-90 rose 26% in relation to the preceding five-year period, the number of graduates in [civil] engineering dropped an average of 8%. Over the coming decade, the number of graduates is expected to rise slightly to reach approximately 300 a year.

Occupation after graduation

According to the survey of graduates, the labour market participation rate of graduates in civil engineering was somewhat lower than the average for engineering disciplines in general. The placement rate of those who had entered the labour market, however, compared favourably to the average. Positions in chosen field accounted for more than 90% of jobs held two years after graduation.

Occupational profile

Jobs held by these graduates two years after graduation fit mainly into the two major occupational groups of engineering (50%) and management (40%). Civil engineers were the largest single group represented, with nearly 30% of jobs. A significant number of graduates worked as construction administrators (20%).

Salary

The average salary of survey respondents working full time put them in the higher salary bracket, at $26,600 annually.

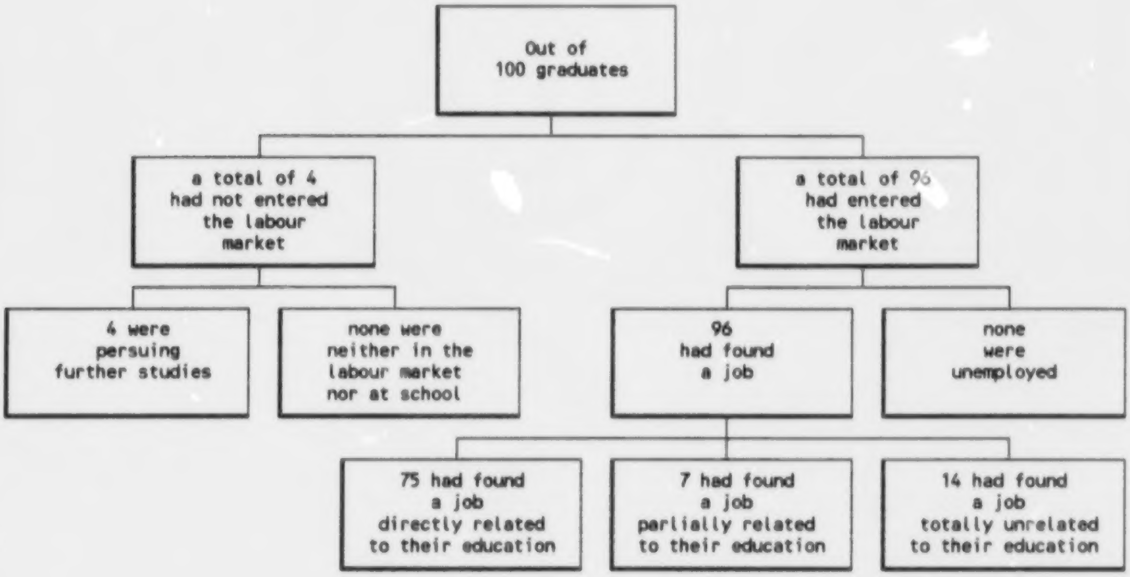
General picture

The 1981-82 recession had a major impact on the labour market for these graduates during the first half of the 1980s. Renewed investment in construction in the past few years, especially in major industrial construction, has given a boost to civil engineering and provided job opportunities for younger civil engineers. Overall, however, these graduates were less satisfied with their academic choice than graduates in other engineering disciplines.

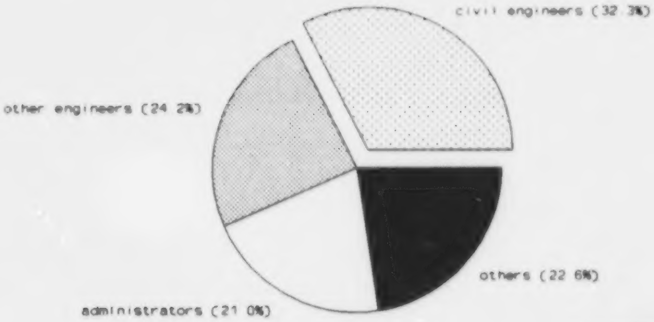
During the 1990s, new hydro-electric projects should support continued growth in requirements, albeit at a rate lower than during the past five years. Growth in requirements should slow down during the second half of the decade, as construction falls off. Overall, one can expect that labour market entry conditions for these graduates will remain better than the average but not as good as in other engineering sectors.

CIVIL ENGINEERING — APPLIED SCIENCES
MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 4 had not entered the labour market
a total of 96 had entered the labour market
4 were persuing further studies
none were neither in the labour market nor at school
96 had found a job
none were unemployed
75 had found a job directly related to their education
7 had found a job partially related to their education
14 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	90	2.1	0.6
1985/90	110	2.1	1.0
1990/95	105	2.2	1.0
1995/2000	100	2.2	1.0

CIVIL ENGINEERING
MASTER'S DEGREE AND DOCTORATE

Master's and doctoral programs are offered at Concordia, Laval, McGill, Montréal (Polytechnique) and Sherbrooke universities.

Trends and projections

The number of degrees granted annually in this discipline bottomed out in the early 1980s and gradually moved up to reach approximately 100 over the past number of years. Despite a drop in the total number of graduate students, the number of graduate degrees in civil engineering should remain more or less at its present level throughout the coming decade.

Graduates' labour market participation

At more than 95%, the labour market participation rate of these graduates was among the highest. The data from the survey of graduates indicate that they entered the labour market without too much difficulty: all survey respondents had found a job, usually directly related to their education.

Occupational profile

Approximately 60% of employed graduates held engineering jobs, more than half of which were in civil engineering. Management positions accounted for 20% of jobs; teaching, for 8%. A wide range of industries had hired recent graduates, although there was a high concentration of jobs in the consulting engineering and transportation sectors.

Salary

At $36,400, the average annual salary of respondents working full time was comparable with that of graduates with master's degrees or doctorates as a whole.

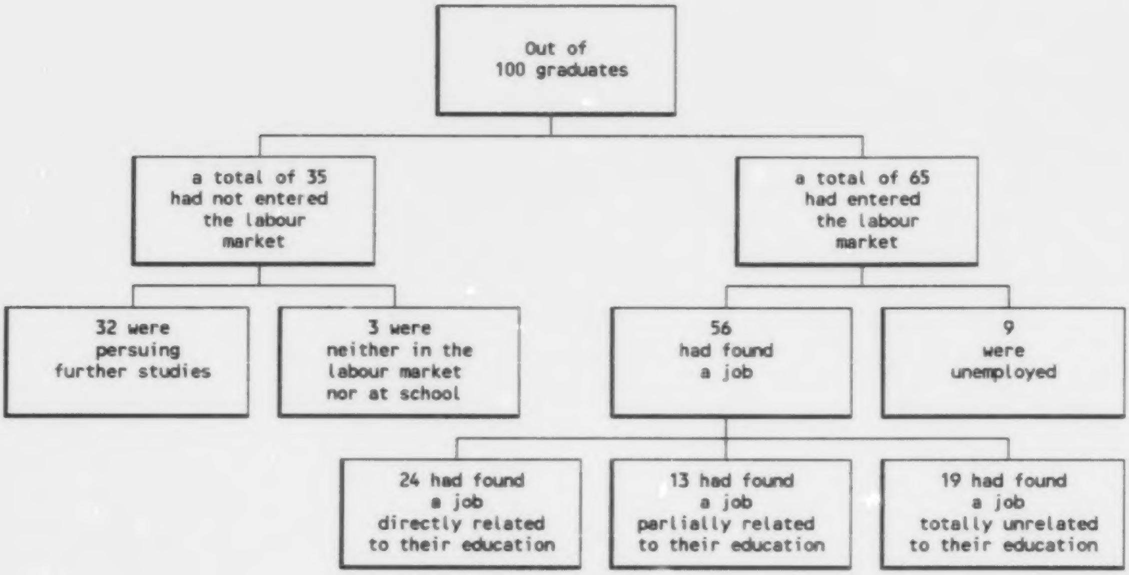
General picture

As in the case of graduates with bachelor's degrees, the labour market for these graduates quickly recovered from the problems caused by the 1981-82 recession. Placement prospects in this discipline over the past number of years have been better than average, in particular in jobs directly related to education.

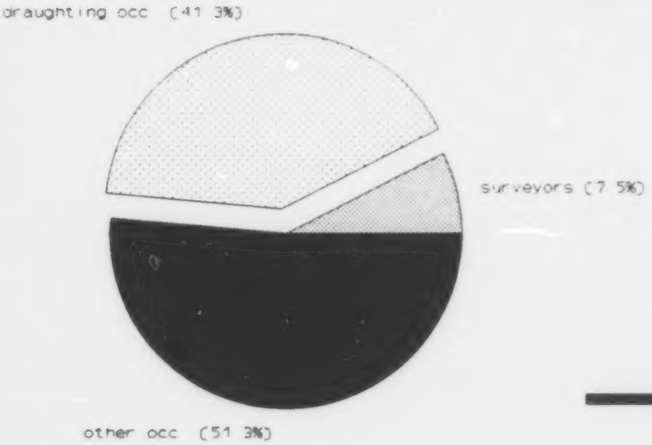
Over the coming years, the maintenance of institutional and industrial construction at a high level should provide better labour market access for graduates in this discipline than for others.

TECHNICAL DRAFTING APPLIED SCIENCES
SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
32 were persuing further studies
3 were neither in the labour market nor at school
56 had found a job
9 were unemployed
24 had found a job directly related to their education
13 had found a job parlially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	705	2.4	---
1985/90	270	2.3	---
1990/95	255	2.7	---
1995/2000	270	2.7	---

TECHNICAL DRAFTING
SECONDARY VOCATIONAL

This sector provides training in general drafting or in more specific types of drafting such as architectural, mechanical, and residential and commercial drafting; it also trains surveying operators.

Trends and projections

Consistent with the general trend, the number of graduates in this field fell from over 700 graduates in the early 1980s to some 270 in the 1985-1990 period. If it continues to maintain its share of graduates, this field of study should produce more or less the same number of graduates over the next decade in both good and bad years.

Occupation after graduation

A very high number of graduates, i.e. nearly one-third, decided to continue their studies, thus making the proportion of employed graduates seem very low at 56%. Also, nearly one-fifth of them found only temporary jobs. Finally, unemployed graduates represented about 14% of those in the labour force, a considerably lower proportion than the 20% for the graduates taken as a whole.

Occupational profile

About 40% of the graduates worked as draftsmen/women, 7% worked in surveying and related jobs and the same percentage worked as construction workers.

Salary

The average annual salary was $13,700, a salary level that is barely higher than that recorded for all employed graduates.

General picture

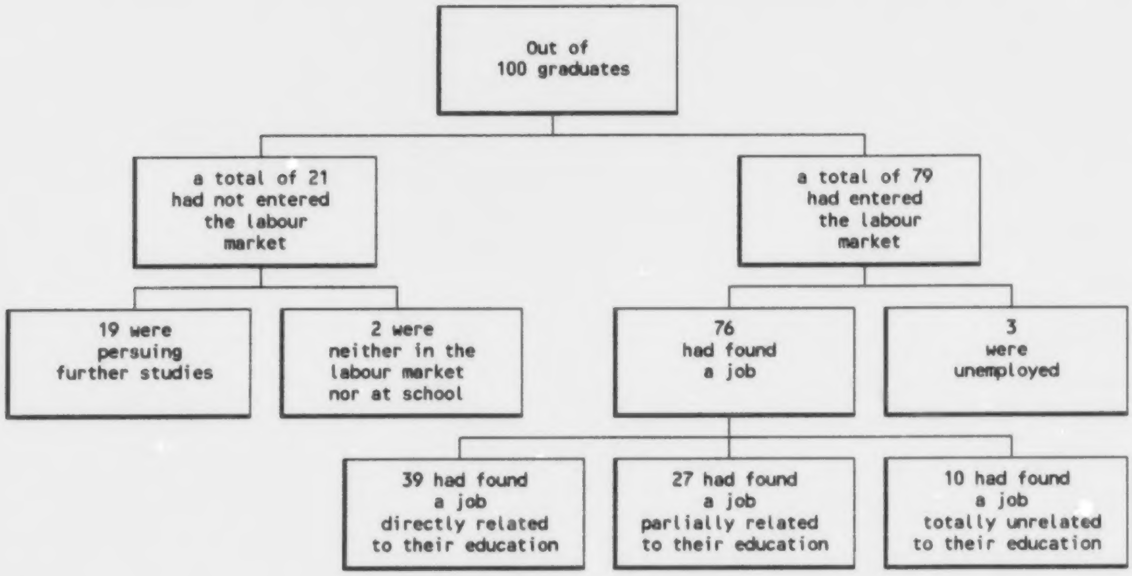
These graduates face a very difficult labour market in which both college and secondary graduates in technical drafting, architectural and building technologies and architectural drafting are all competing for jobs. This situation largely explains why a high number of secondary graduates decide to continue their studies. In recent years, new opportunities made possible by the computerization of both mechanical and architectural drafting have had a considerable impact on the employment rate of these professionals. In particular, it has become very difficult to enter the labour market without a knowledge of basic design software. Moreover, these new computer technologies greatly diminish the resources that are allocated to updating, correcting or modifying existing plans, thus reducing the human resources assigned to these tasks. At the same time, less-qualified draftsmen/women, tracers, are more vulnerable to technological change. However, draftsmen/women with more diversified technical skills in strength of materials, mechanics, architecture or related fields that allow them to do design drafting, are sought after and face a very favourable labour market.

ARCHITECTURAL DRAFTING TECHNOLOGY

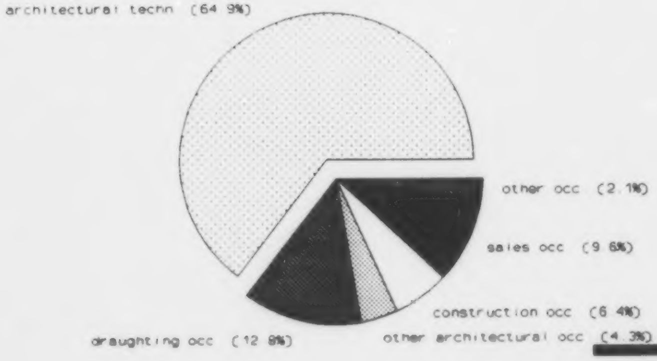
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 21
had not entered
the labour
market
a total of 79
had entered
the labour
market
19 were
persuing
further studies
2 were
neither in the
labour market
nor at school
76
had found
a job
3
were
unemployed
39 had found
a job
directly related
to their education
27 had found
a job
parlially related
to their education
10 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	225	1.5	0.2
1985/90	185	1.3	1.0
1990/95	165	1.3	0.8
1995/2000	170	1.3	0.7

APPLIED SCIENCES

ARCHITECTURAL DRAFTING TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

Training in this field is offered in the Lower St. Lawrence, Laval- Laurentides-Lanaudière, Montreal, Mauricie-Bois-Francs and Saguenay-Lac St-Jean regions.

Trends and projections

The number of graduates in this discipline has been on the decline, dropping from an annual average of 230 to 180 between the first and the second half of the 1980s. Given the expected decrease in the school population, this downward trend should continue with an average of between 160 and 170 graduates annually over the next ten years.

Occupation after graduation

Despite the very low unemployment rate among these graduates, a slightly higher than average proportion decided to continue their studies after graduation. The 96% placement rate for these graduates was among one of the best at the college level. The very large majority of these jobs were at least partially related to education and more than 50% of graduates indicated that they held jobs directly related to their education. Temporary or part-time work was not very frequent.

Occupational profile

The largest number of graduates by far were working in the occupational group of architectural technicians (65% of jobs) one year after graduation. A large proportion of graduates indicated that they held jobs as designers (13%), while for 5% of them jobs as salespersons-technicians provided a means of entry into the labour market. Finally, occupations associated with site supervision accounted for 5% of employed graduates.

Salary

Despite better than average performance with respect to placement rate in related occupations, the salary earned by these graduates was slightly lower than average. The average annual salary for graduates who were working full time was $15,800 in 1988.

General picture

Employment follows the activity cycle in the construction sector. Thus, in the second half of the 1980s employment opportunities benefited from record levels of residential, institutional and industrial activity.

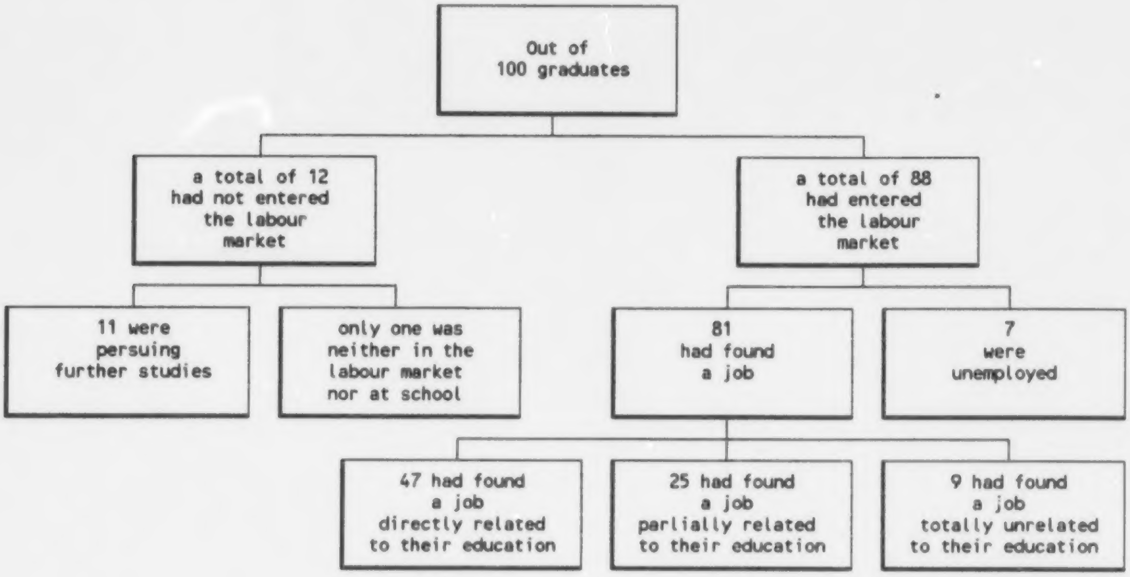
In the short and medium terms, construction activity will continue at its current level owing to the completion of major industrial projects and the start of the James Bay hydroelectric project. Over the second half of the 1990s, a considerable decrease in employment opportunities could be experienced while a cyclical decline in the construction sector could accompany the completion of these large projects.

OTHER ARCHITECTURE AND CONSTRUCTION TECHNOLOGIES

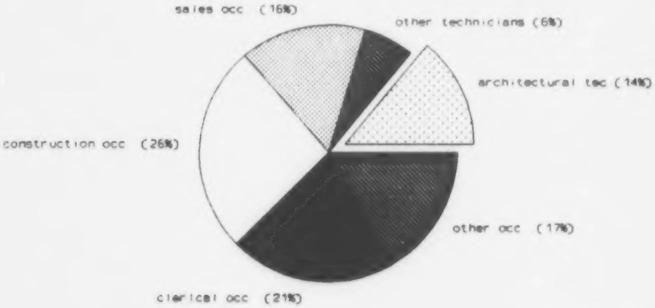
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
11 were persuing further studies
only one was neither in the labour market nor at school
81 had found a job
7 were unemployed
47 had found a job directly related to their education
25 had found a job parlially related to their education
9 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	205	1.4	0.3
1985/90	150	1.0	1.0
1990/95	120	1.0	0.8
1995/2000	125	1.0	0.5

APPLIED SCIENCES

OTHER ARCHITECTURE AND CONSTRUCTION TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of training includes the technologies of building mechanical systems, realty appraisal, welding and naval architecture.

Trends and projections

After experiencing a higher than average increase in the number of graduates until 1986, this number has dropped by more than 20% since then. Given the dwindling school population at the college level, further decreases in the number of graduates are expected over the next decade.

Occupation after graduation

The data compiled on the basis of the 1988 Relance Survey indicate that these graduates face a favourable labour market. Unlike graduates in architectural drafting technologies, few of them chose to continue their studies, partly because of a placement rate of over 90%. Nearly 90% of employed graduates considered their duties partially related to their education and 60% considered this link direct. Moreover, most of the jobs were permanent and full time.

Occupational profile

Despite the fact that these graduates generally considered their jobs related to their education, they had a number of diverse jobs available to them upon graduation. Occupations in the construction sector constituted the main occupational category, with 25% of the jobs. Technicians, especially engineering and architecture technicians, accounted for slightly more than 20% of the jobs obtained. The occupations of salespersons-technicians and office workers constituted the other groups that provided the most openings to graduates upon completion of their studies.

Salary

The average salary of respondents to the survey who were working full time after graduation was $18,300 in 1988.

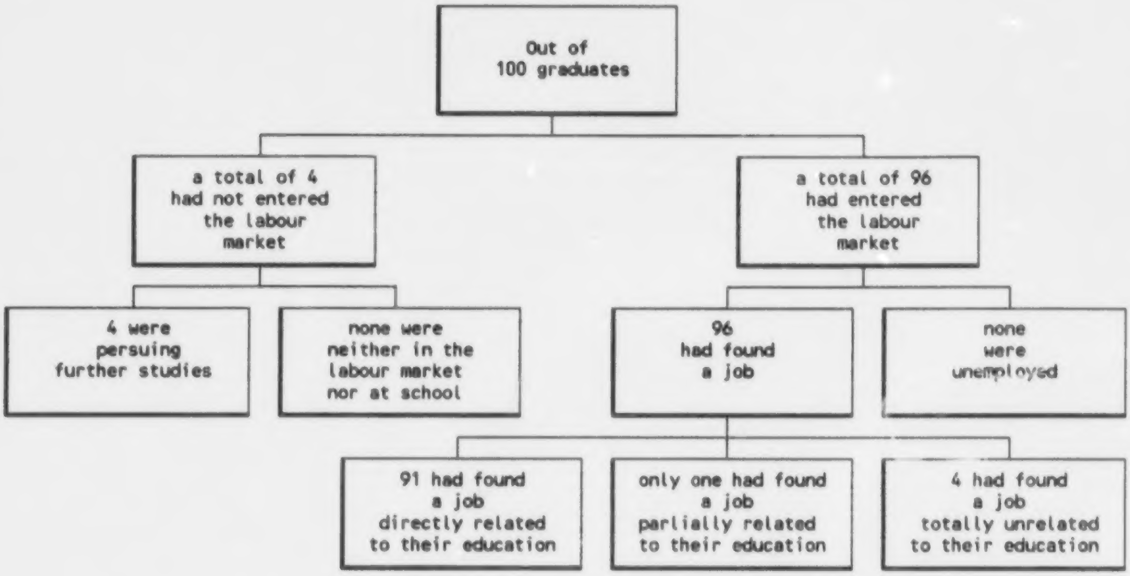
General picture

Closely linked to the growth of construction activity, the employment outlook for these graduates is subject to the cyclical fluctuations of this sector. Record activity levels in residential construction at the end of the 1981-82 recession gave rise to very favourable employment opportunities for these graduates. Over the next few years the economic decline in this sector will result in a contraction of the market for these graduates, particularly for those going into construction-related occupations.

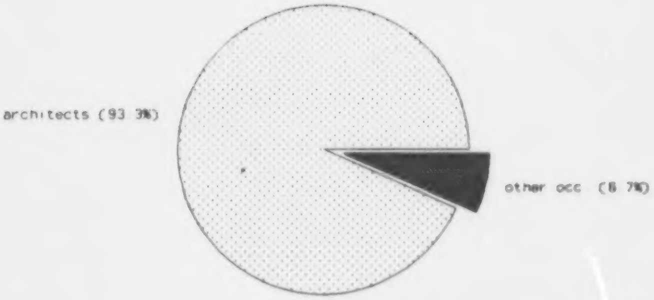
ARCHITECTURE
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 4 had not entered the labour market
a total of 96 had entered the labour market
4 were persuing further studies
none were neither in the labour market nor at school
96 had found a job
none were unemployed
91 had found a job directly related to their education
only one had found a job partially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	180	0.8	1.1
1985/90	185	0.7	1.0
1990/95	200	0.8	1.0
1995/2000	200	0.8	0.9

BACHELOR'S DEGREE

This field of study encompasses the different specialized disciplines related to architecture, except urban planning and landscape architecture. Programs in architecture are offered by Laval, McGill and Montréal. Mathematics courses are a prerequisite for all programs, while courses in psychology, biology, physics and chemistry may be prerequisites at some universities.

Trends and projections

The number of graduates has remained more or less steady throughout the 1980s, with an annual average of 180. During the coming decade, if the present proportion is maintained, there will be an average of 200 graduates a year.

Occupation after graduation

These graduates showed the highest labour market participation rate of any group of graduates with bachelor's degrees. Less than 5% of them decided not to join the work force in order to pursue further studies. Two years after graduation, all those who had entered the labour market were employed, and the vast majority were working in occupations directly related to their education.

Occupational profile

More than 90% of these graduates were working as architects.

Salary

Respondents to the 1988 survey who were working full time two years after graduation reported an average annual salary of $25,300. This salary level was quite comparable to that of respondents with bachelor's degrees taken as a whole.

General picture

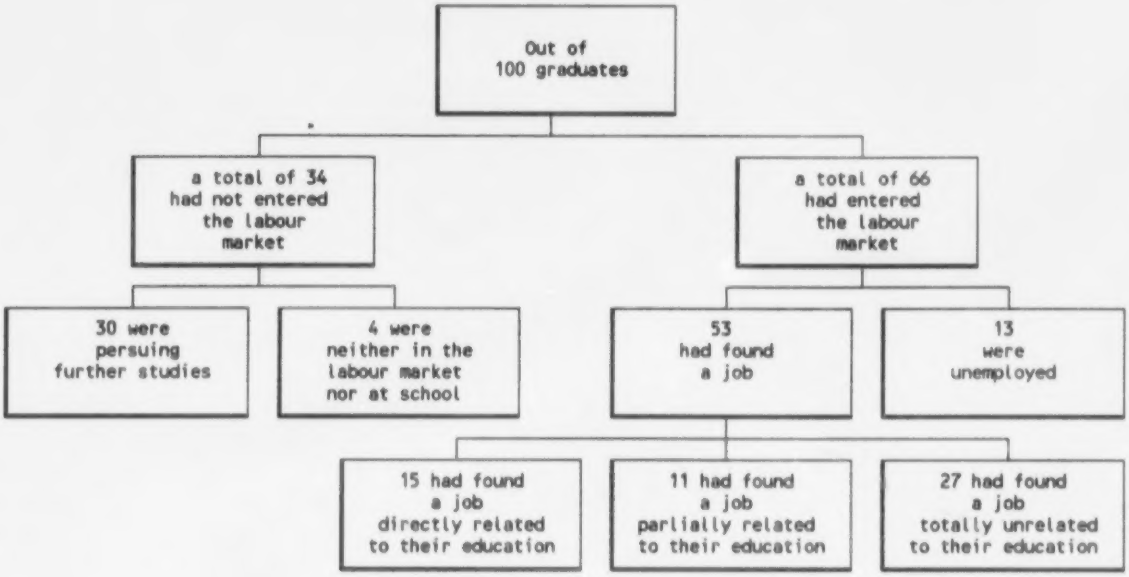
Graduates in this discipline were among the most advantaged of graduates with first degrees in terms of both labour market entry and salary. It is not surprising to note that proportionately more of these respondents were satisfied with their choice of training than the average graduate with a bachelor's degree.

The first half of the 1990s should compare quite favourably to the period just past in terms of labour market entry opportunities. As for the second half, job openings could drop slightly, but should still remain above average for graduates with bachelor's degrees.

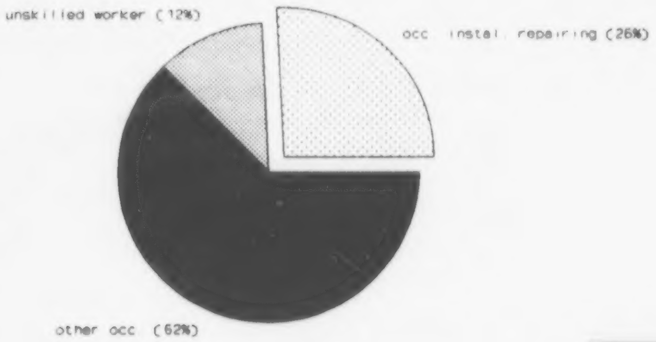
OFFICE EQUIPMENT ELECTRONICS
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 34 had not entered the labour market
a total of 66 had entered the labour market
30 were persuing further studies
4 were neither in the labour market nor at school
53 had found a job
13 were unemployed
15 had found a job directly related to their education
11 had found a job parlially related to their education
27 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	2280	7.7	0.2
1985/90	625	5.4	1.0
1990/95	475	5.0	1.2
1995/2000	495	5.0	1.2

APPLIED SCIENCES

OFFICE EQUIPMENT ELECTRONICS
SECONDARY VOCATIONAL

This field of study comprises a large number of disciplines, including the specialties of servicing and electromechanics of electronic and office equipment as well as the operation, installation and repair of telecommunications equipment.

Trends and projections

Like the field of electricity, office equipment electronics has lost most of its popularity over the years. While more than 2,200 students graduated during the 1980-1985 period, only about 625 graduated in the second half of the decade. The number of graduates may well continue to decline during the 1990s. Until now, these disciplines have attracted mostly male students.

Occupation after graduation

Recent labour market data largely explain this decline. Barely more then 50% of graduates were able to find a job in the year after graduation, and more than half of them held jobs that were totally unrelated to their specialty. In these circumstances, it is not surprising to note that nearly one out of three graduates preferred to continue his or her studies. This could explain why the 20.7% unemployment rate is not higher for this field of study than for the entire secondary vocational sector.

Occupational profile

Graduates held a number of very diverse occupations. This can be explained both by the variety of study programs and the high number of graduates who held jobs that were unrelated to their specialty. Among the most closely related occupations are installer of electronic equipment, servicer of radios and televisions and worker in the electrical and electronic products sector, which accounted for nearly one-third of employed graduates. Note that nearly one-half of all workers were employed in the retail trade.

Salary

The average salary of electronics graduates is not very high. It is only $11,700 compared to an average of $13,600. The difficulties faced by these graduates on the labour market and particularly the fact that a large number of them held jobs that were unrelated to their training no doubt greatly explain this gap.

General picture

Graduates in this field of training at the secondary level are primarily oriented towards the more traditional areas of electronics, i.e. the repair of home electrical appliances and office equipment. In recent years, a large number of young people have been trained in these fields, thus glutting the market somewhat. Moreover, graduates of electrical technology at the college level who are not inclined towards concept-oriented tasks have also entered these employment sectors in large numbers, adding to the already strong competition.

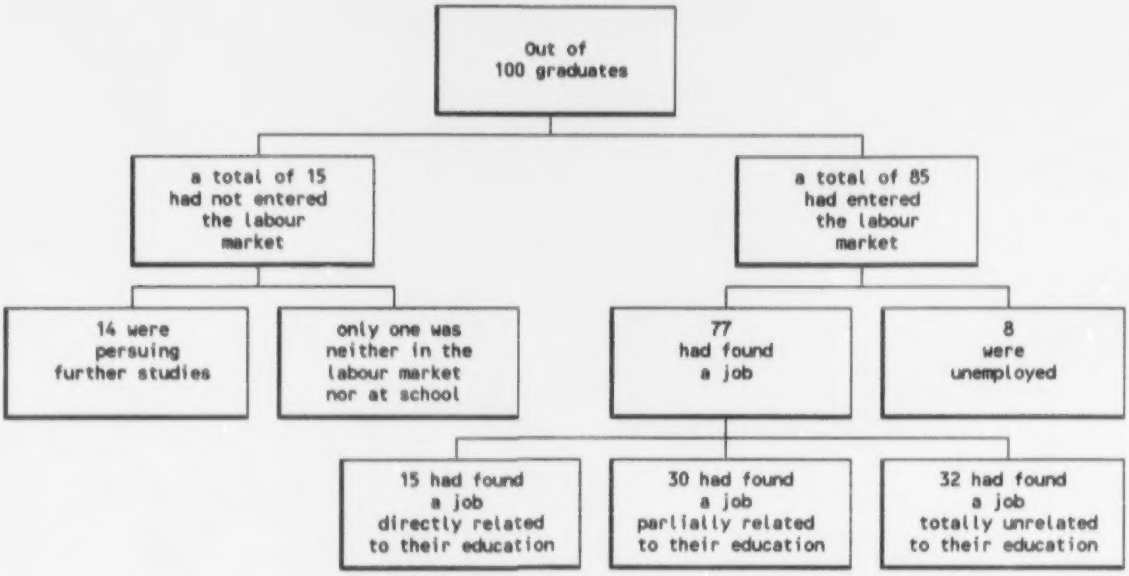
Candidates who wish to improve their employment opportunities over the next few years should increasingly acquire more specialized knowledge in electronics applications in the area of production equipment rather than small appliances. The others can expect to see the level of competition remain very high.

ELECTROMECHANICS OF AUTOMATED SYSTEMS

SECONDARY VOCATIONAL

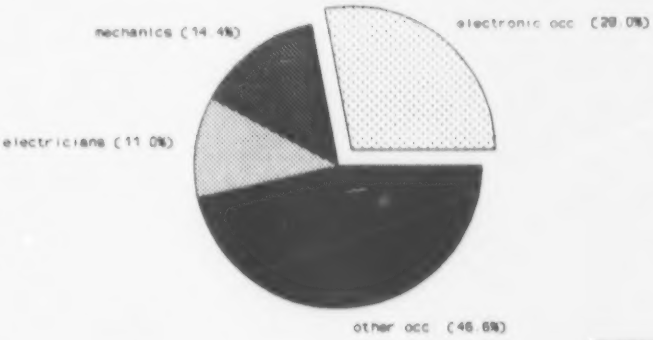
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 15 had not entered the labour market
a total of 85 had entered the labour market
14 were persuing further studies
only one was neither in the labour market nor at school
77 had found a job
8 were unemployed
15 had found a job directly related to their education
30 had found a job partially related to their education
32 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	145	0.5	1.6
1985/90	425	3.7	1.0
1990/95	365	3.9	1.0
1995/2000	380	3.9	1.1

ELECTROMECHANICS
OF AUTOMATED SYSTEMS
SECONDARY VOCATIONAL

This field of study provides training in electromechanics of automated systems. It enables students to acquire the skills needed to maintain and ensure the operation of automated production equipment.

Trends and projections

Unlike the field of office equipment electronics, electronics of automated systems has attracted a greater number of students ever since it was established in 1984, thus going against the continuous downtrend in enrolment in secondary vocational programs. Over the 1990s, the number of graduates should approach some 350 to 400 annually.

Occupation after graduation

More than three-quarters of the graduates found jobs which were full time and permanent for the most part. The unemployment rate in this group was twice as low as that of graduates taken as a whole. However, these positive statistics are overshadowed by the high number of graduates, nearly two-fifths, who held jobs unrelated to their qualifications. This may have prompted a sizable proportion of graduates to continue their studies further.

Occupational profile

Of the very wide range of occupations practised by these graduates, nearly one-quarter of the jobs were in the area of electronic equipment installation; another group, accounting for slightly more than 10% of employed graduates, were working as electricians.

Salary

The average annual salary in 1988 was about $16,600, a salary level more than $3,000 higher than the average salary of graduates taken as a whole.

General picture

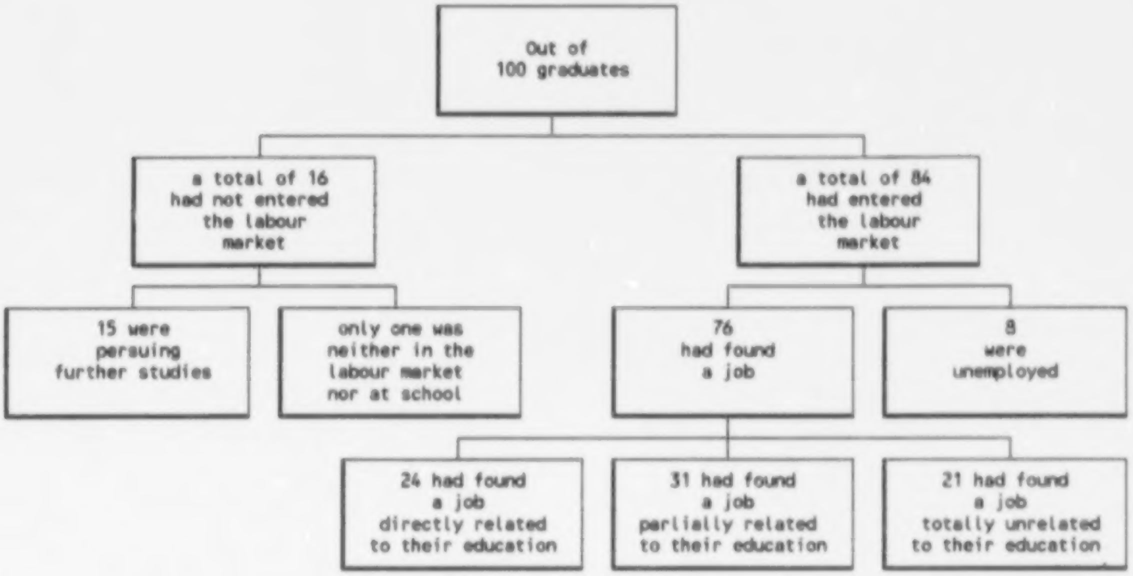
Unlike their colleagues specializing in the repair of household appliances and office equipment, the employment outlook in related occupations for these graduates compares favourably to the average for the secondary vocational sector. Given the increasingly larger investments made by manufacturing companies in automated production equipment and the relatively new skills sought for the maintenance, repair and operation of this equipment, demand for these graduates should grow considerably over the next few years. Employment opportunities in this field are expected to grow even more and surpass the average of other disciplines at this level of training.

ENGINEERING TECHNOLOGY ELECTRICAL AND ELECTRONIC

APPLIED SCIENCES

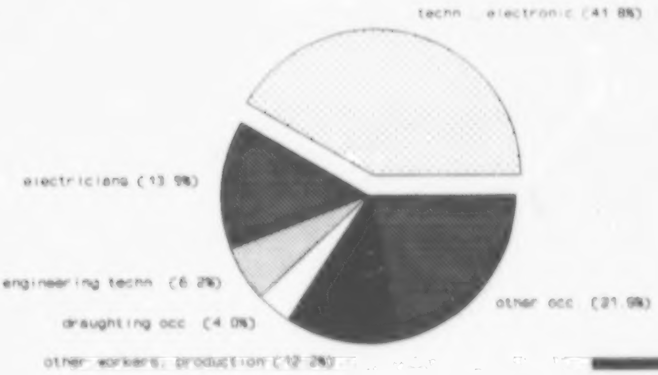
VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 16 had not entered the labour market
a total of 84 had entered the labour market
15 were persuing further studies
only one was neither in the labour market nor at school
76 had found a job
8 were unemployed
24 had found a job directly related to their education
31 had found a job parlially related to their education
21 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1145	7.7	0.7
1985/90	1323	9.3	1.0
1990/95	1125	8.9	0.9
1995/2000	1170	8.9	0.9

APPLIED SCIENCES

ENGINEERING TECHNOLOGY ELECTRICAL AND ELECTRONIC

VOCATIONAL COLLEGE DIPLOMA

Programs of study in electrical and electronic engineering technologies are available in all Quebec regions. Specialized avionics and audio-visual equipment technologies are also given in a limited number of college institutions in the greater Montreal and Quebec City areas.

Trends and projections

Offered in most college institutions, these technologies are also among the most popular since they encompass nearly 10% of vocational college graduates. This popularity was on an upward trend until approximately the mid-1980s when they started to stabilize. If this trend continues over the 1990s, an average of 1,150 students will graduate each year.

Occupation after graduation

About 15% of these graduates were continuing their studies one year after completing their degrees. Of the other graduates, 90% had found a job, representing a proportion comparable to vocational college graduates taken as a whole. According to the graduates, however, these jobs were less directly related to education than in other disciplines. The relation was nonetheless significant since nearly three out four graduates considered their duties at least partially related to their education.

Occupational profile

The occupational profile of the entry level jobs clearly showed that these graduates were finding jobs that were more directly related to the installation and repair of electronic equipment than design. In fact, installation jobs accounted for 42% and repair jobs for barely 11% of these positions. Maintenance electricians' jobs also provided employment opportunities that have to be considered. Unlike most college disciplines, the categories of office work and sales figured little in the occupational profile of these graduates.

Salary

The annual salary of $20,700 earned by respondents to the survey who were working full time was higher than the average income of the vocational college graduates taken as a whole.

General picture

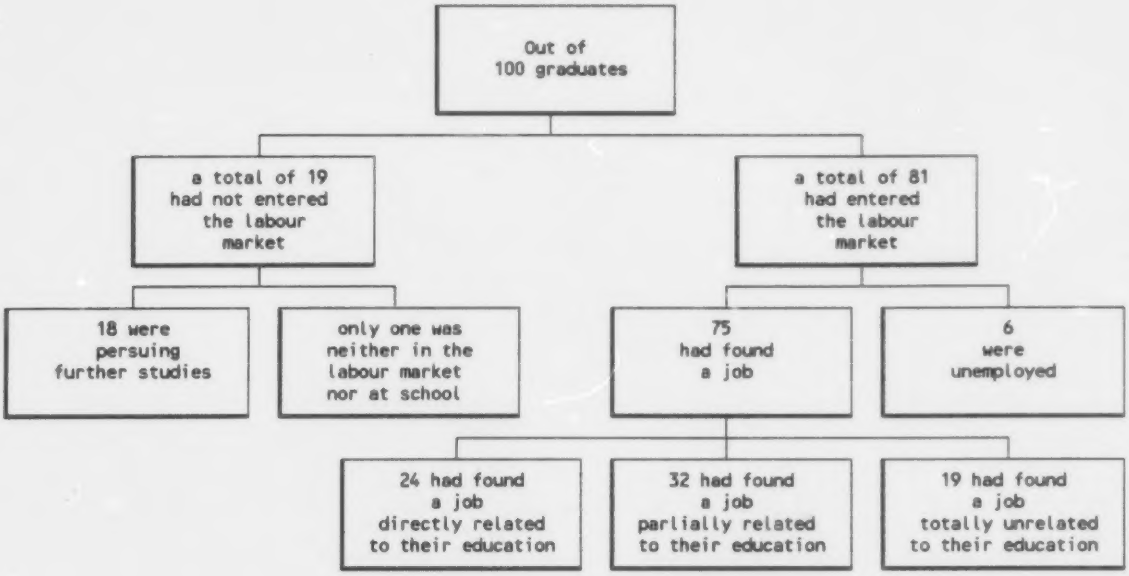
The technological changes which have been characterized by electronics applications to office equipment has given rise to appreciable growth in the demand for electronics technicians to install and repair this equipment. Although the demand will continue to be significant over the next few years, the labour force that is presently available and the graduates who will continue to enter the labour market will likely create a surplus of workers with skills that are already more traditional. In other respects, shortages of qualified labour in the sector of electronics applied to production equipment are now foreseeable and a large requirement growth is expected in this area.

INSTRUMENTATION

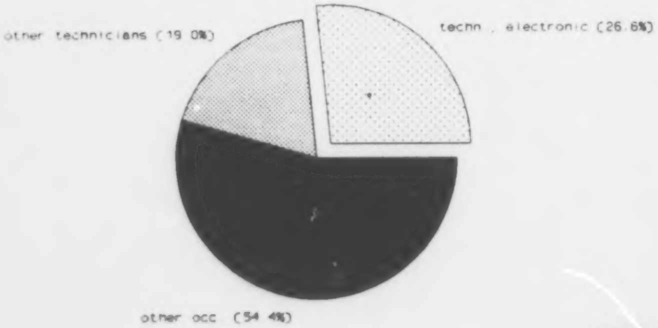
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
18 were persuing further studies
only one was neither in the labour market nor at school
75 had found a job
6 were unemployed
24 had found a job directly related to their education
32 had found a job partially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	205	1.4	0.5
1985/90	175	1.2	1.0
1990/95	145	1.2	1.1
1995/2000	155	1.2	1.1

APPLIED SCIENCES

INSTRUMENTATION
VOCATIONAL COLLEGE DIPLOMA

A specialty of electrotechnology, this discipline is offered in six of the twelve Quebec regions, namely the Lower St. Lawrence, Estrie, Mauricie-Bois-Francs, Montreal, Quebec City and Saguenay- Lac St-Jean regions.

Trends and projections

The growth in the number of graduates in this discipline closely reflected that of the vocational college sector taken as a whole. If this trend continues, an average of 140 to 150 students are expected to graduate in this discipline each year over the next decade.

Occupation after graduation

According to the 1988 Relance Survey, a proportion of graduates comparable to the average entered the labour force. The placement rate for these graduates was 93% one year after graduation, leaving only 7% unemployed. The jobs, however, were less often and less directly related to education than the average.

Occupational profile

The weakest relation between education and work translated into a very diversified occupational profile. As with all other applied sciences technologies at the college level, the largest proportion of graduates held jobs related to manufacturing. Of these, the occupational group of installers and repairers of electronic and precision equipment was the largest, with 30% of the jobs. The groups of engineering technicians and designers, which accounted for 18% of the jobs, also provided these graduates with interesting employment opportunities. However, the fairly large number of less specialized clerks and salespersons, which accounted for 25% of the jobs, points to the difficulty experienced by some graduates on the labour market.

Salary

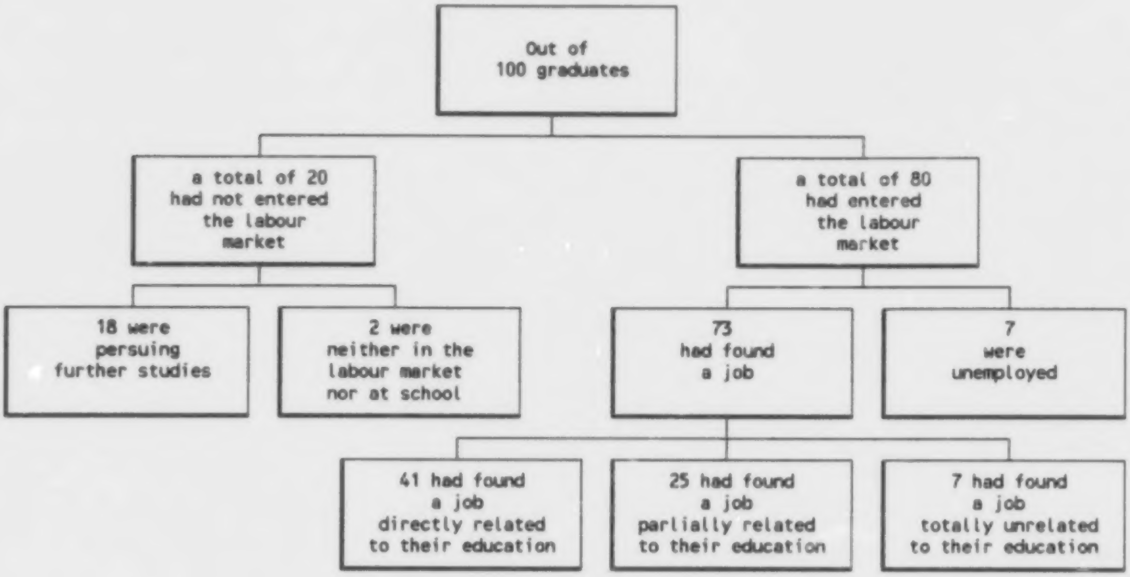
The average annual income of graduates who were working full time one year after completing their studies was $19,200 in 1988.

General picture

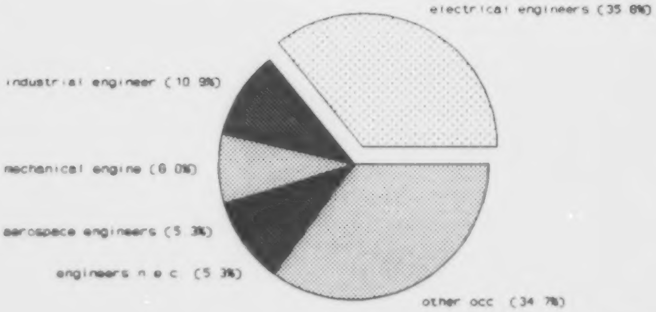
Graduates in this field of training will probably be in the best position to seize opportunities that will increasingly arise in fields related to the installation, maintenance and operation of production equipment using electronic technologies. The requirement growth which accelerated in the second half of the 1980s should stay at the same level and improve the employment outlook even more for these graduates.

ELECTRICAL ENGINEERING **APPLIED SCIENCES**
BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 20
had not entered
the labour
market
a total of 80
had entered
the labour
market
18 were
persuing
further studies
2 were
neither in the
labour market
nor at school
73
had found
a job
7
were
unemployed
41 had found
a job
directly related
to their education
25 had found
a job
parlially related
to their education
7 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	505	2.3	1.1
1985/90	740	3.0	1.0
1990/95	775	3.0	0.7
1995/2000	800	3.1	0.8

ELECTRICAL ENGINEERING
BACHELOR'S DEGREE

This field of study encompasses specialties in electricity and electronics. Programs are offered at Concordia, Laval, Polytechnique and Sherbrooke. The prerequisites are mathematics, physics, chemistry and biology, in addition to a Diploma of Collegial Studies or equivalent.

Trends and projections

The popularity of this discipline has grown in comparison with other engineering disciplines. The number of graduates in electrical engineering in relation to other engineering specialties rose from 25% to 30% between the early and late 1980s. During the 1990s, the proportion should be about 30%, or an average of 775 to 800 graduates annually.

Occupation after graduation

According to the 1988 survey of graduates, the labour market participation rate of these graduates was 80%. More than 90% of those who had decided to enter the labour market had found jobs. Of those who were working, a high percentage (90%) had jobs at least partially related to their education.

Occupational profile

Two years after graduation, a high proportion of graduates were working in the engineering field (65%). The electrical engineers group accounted for 35% of jobs. Proportionately fewer of these graduates than graduates in engineering taken as a whole held management jobs.

Salary

As for engineering graduates taken as a whole, the average salary of graduates employed two years after graduation was higher on average than that of graduates with bachelor's degrees taken together. The average salary was $29,100 annually.

General picture

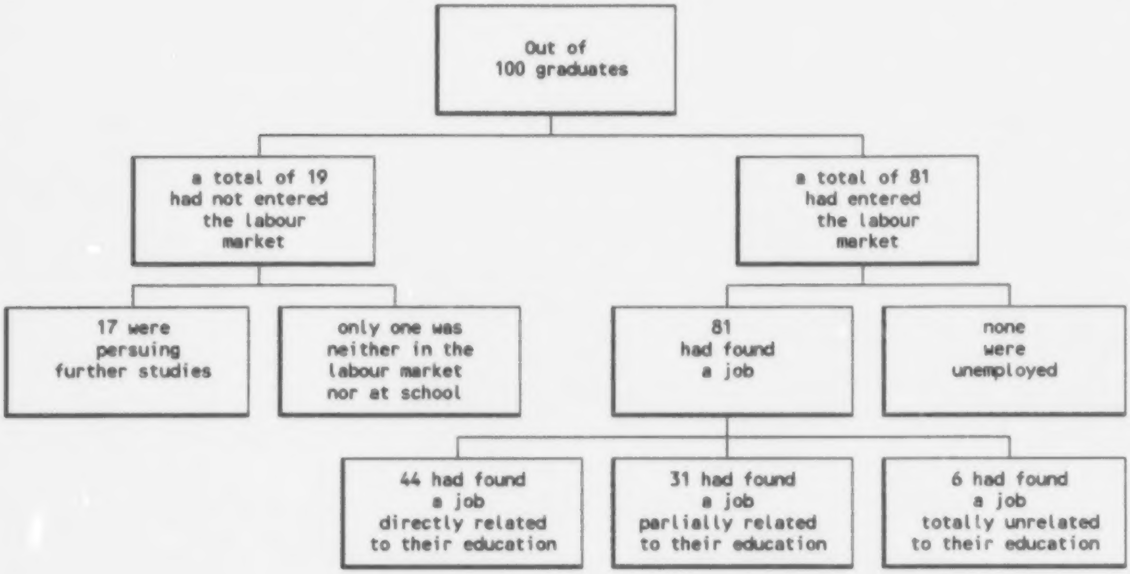
The above information points to a more favourable labour market on average for these graduates. Compared with other engineering disciplines, the situation seems to be average.

The rise in the number of graduates during the 1980s was accompanied by an increase in requirements, and this meant that the market remained relatively steady. The market situation in the 1990s may be somewhat different, as requirement growth is expected to slow down. Thus graduates in this discipline in the next few years may be faced with a somewhat tighter market than at present. All the same, prospects will still be better than average.

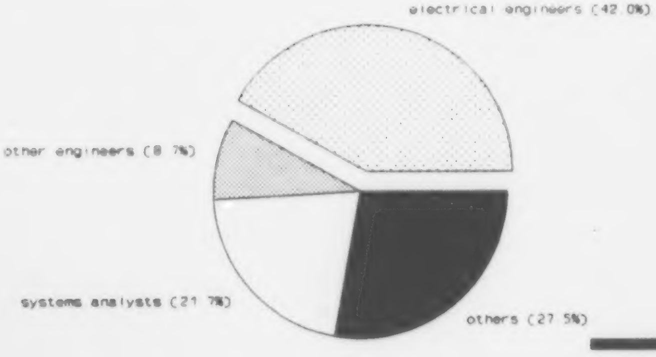
ELECTRICAL ENGINEERING
MASTER'S DEGREE AND DOCTORATE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
17 were persuing further studies
only one was neither in the labour market nor at school
81 had found a job
none were unemployed
44 had found a job directly related to their education
31 had found a job parlially related to their education
6 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	90	2.2	1.0
1985/90	125	2.5	1.0
1990/95	110	2.3	1.0
1995/2000	110	2.3	1.0

ELECTRICAL ENGINEERING
MASTER'S DEGREE AND DOCTORATE

Graduate programs are offered at Concordia, Laval, McGill, Montréal (Polytechnique) and Sherbrooke universities.

Trends and projections

As in the case of civil engineering, the number of graduates with master's degrees or doctorates in electrical engineering grew more quickly than the number of graduates in other engineering disciplines. During the past decade, the number of degrees granted annually doubled from 60 to 120. If the present proportion is maintained, the number of graduates during the 1990s should be about 110 annually.

Graduates' labour market participation

Two years after graduation, the vast majority of those who had decided to enter the labour market had found jobs, most at least partly related to their education. Proportionately, about the same number of graduates in this discipline chose to continue their education as the number of graduates taken as a whole did. Generally, however, the rate was 25% lower than among graduates in other engineering disciplines.

Occupational profile

Half of the graduates who were employed two years after graduation were working in engineering jobs, more than two thirds as electrical engineers. The group of system analysts also provided a significant number of opportunities, accounting for 20% of jobs found. The third most important group, with 14% of jobs, was the management category. Contrary to the case of other engineering groups, less than 10% of these graduates were hired by the professional and technical services industry. The communications industries (transmission and equipment manufacturing) was the principal sector providing employment; more than 46% of employed graduates worked in this sector.

Salary

The average annual salary of $43,500 reported by respondents to the 1988 survey was markedly higher than that of respondents in other disciplines.

General picture

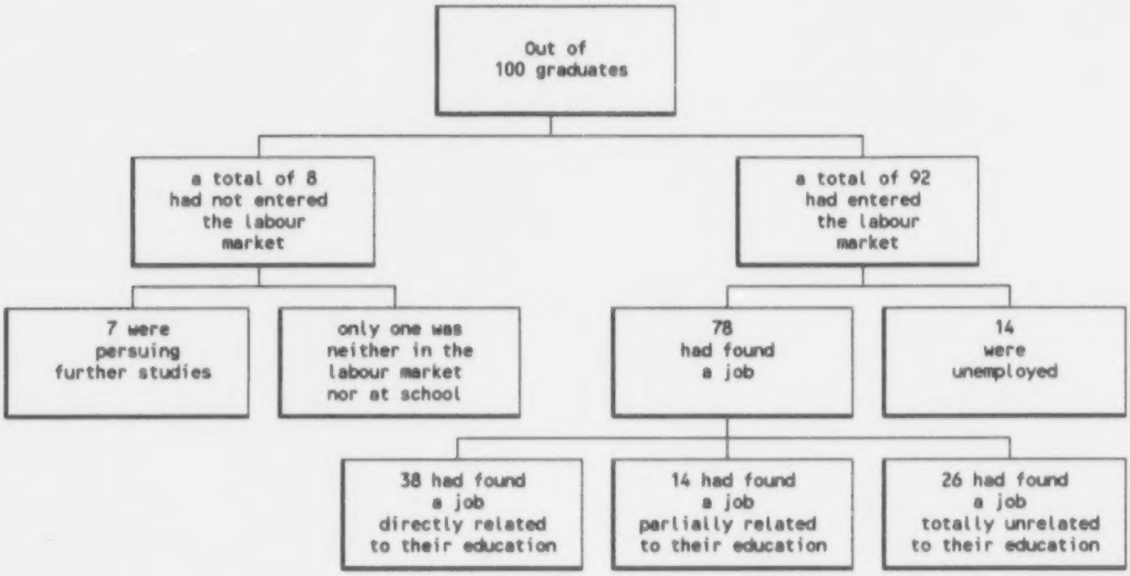
The labour market conditions facing these graduates were comparable with those facing graduates with advanced degrees in other fields. Prospects have remained more or less the same over the past number of years, as increased demand followed the curve of graduates. An above average percentage said they were satisfied with their education.

During the 1990s, labour market entry prospects for related jobs will continue to be affected positively by the dynamism of the telecommunications and communications equipment manufacturing industries. The use of automated production equipment in manufacturing should also help to create jobs for these graduates.

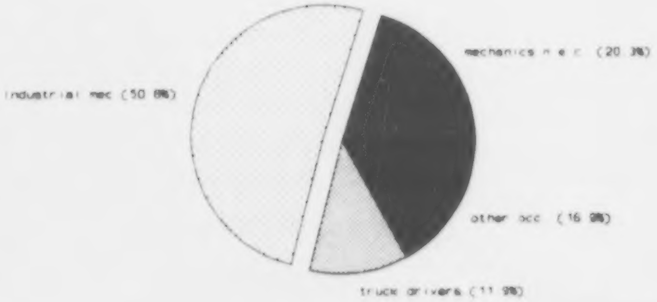
HEAVY EQUIPMENT
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 8 had not entered the labour market
a total of 92 had entered the labour market
7 were persuing further studies
only one was neither in the labour market nor at school
78 had found a job
14 were unemployed
38 had found a job directly related to their education
14 had found a job parlially related to their education
26 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	910	3.1	---
1985/90	290	2.5	1.0
1990/95	190	2.0	0.7
1995/2000	200	2.0	0.3

HEAVY EQUIPMENT
SECONDARY VOCATIONAL

This discipline trains heavy equipment mechanics.

Trends and projections

The popularity of this training program has declined and the number of annual graduates has dropped by more than two-thirds over the past decade.

Occupation after graduation

More than 90% of the graduates in this discipline entered the labour market immediately after graduation. The unemployment rate for these graduates was 15% compared to an average of 20% for secondary vocational graduates. The jobs obtained were, for the most part, at least partially related to education and, for more than 75% of graduates, full time and permanent.

Occupational profile

More than 70% of those who found a job were working as mechanics. The category of industrial machinery mechanics which comprises farm, forestry and construction machinery mechanics as well as diesel mechanics constituted the largest group, accounting for more than 50% of the jobs. With 10% of the jobs, the automobile mechanics groups also provided an appreciable number of first jobs. In addition to the mechanics groups, graduates in this field of training held jobs primarily as truck drivers and unskilled workers.

Salary

At $18,000, the average annual salary reported by graduates in this discipline who were working full time one year after graduation was one of the highest salary levels in the secondary vocational sector.

General picture

Compared to automobile or diesel mechanics, graduates in this discipline appeared to enjoy a more favourable labour market in terms of employment opportunities and salary. These professionals benefited from both the greater mechanization of agricultural, forestry and mining operations and the expansion of the transportation sector. Although they partly share the same labour market as college graduates in mechanical engineering technology, these graduates are able to compete effectively even if they do have limited access to jobs in the manufacturing sector.

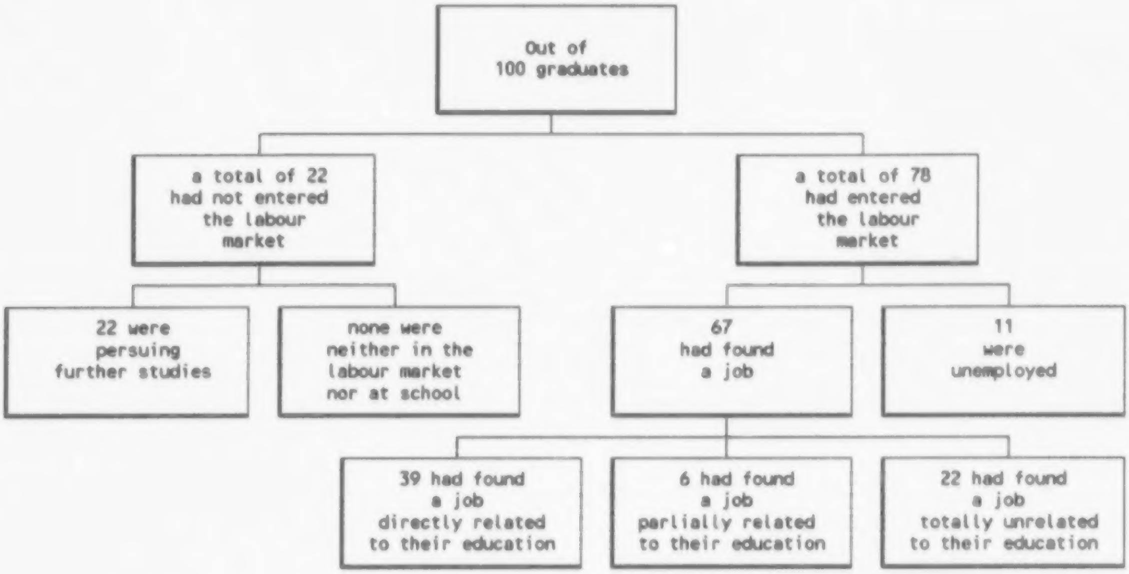
The high level of activity in industrial construction expected in the first half of the 1990s and the continuing mechanization of the agricultural, forestry and mining sectors should help to maintain above-average job opportunities for these graduates.

FARM MACHINERY MECHANICS

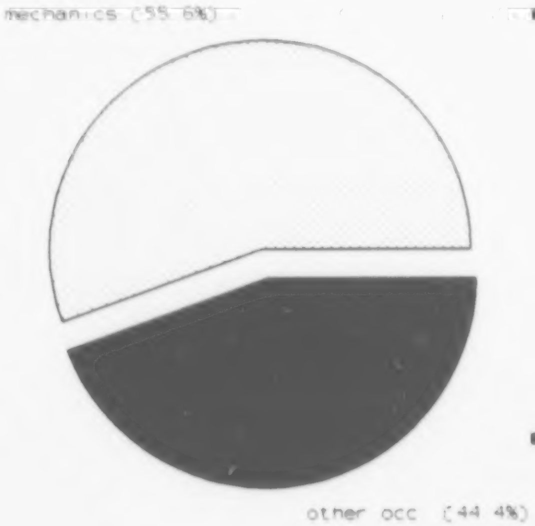
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 22 had not entered the labour market
a total of 78 had entered the labour market
22 were persuing further studies
none were neither in the labour market nor at school
67 had found a job
11 were unemployed
39 had found a job directly related to their education
6 had found a job partially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	40	0.1	---
1985/90	25	0.2	1.0
1990/95	15	0.1	1.1
1995/2000	15	0.1	0.9

FARM MACHINERY MECHANICS

SECONDARY VOCATIONAL

This field of study includes training programs dealing specifically with the maintenance and repair of farm machinery.

Trends and projections

Given the limited number of available programs and the few occupations that are open to these students, farm machinery mechanics is among the programs that trains the least number of secondary vocational graduates. If the recent trend continues, it is estimated that the annual number of graduates will remain at about 15 over the 1990s.

Occupation after graduation

Of the 18 graduates who participated in the 1988 survey, 12 were employed. Two-thirds of them were working in jobs that were directly or partially related to their specialty and all of them were working full time. Of the others, only two were unemployed, representing a lower unemployment rate than that of secondary vocational graduates taken as a whole.

Occupational profile

One-third of the employed graduates were working as mechanics and repairers of industrial or farm machinery. The occupational profile of these graduates also included dairy farm workers and print shop workers.

Salary

The hourly wage for occupations most frequently related to this study program varied between $6 and $17 in 1988.

General picture

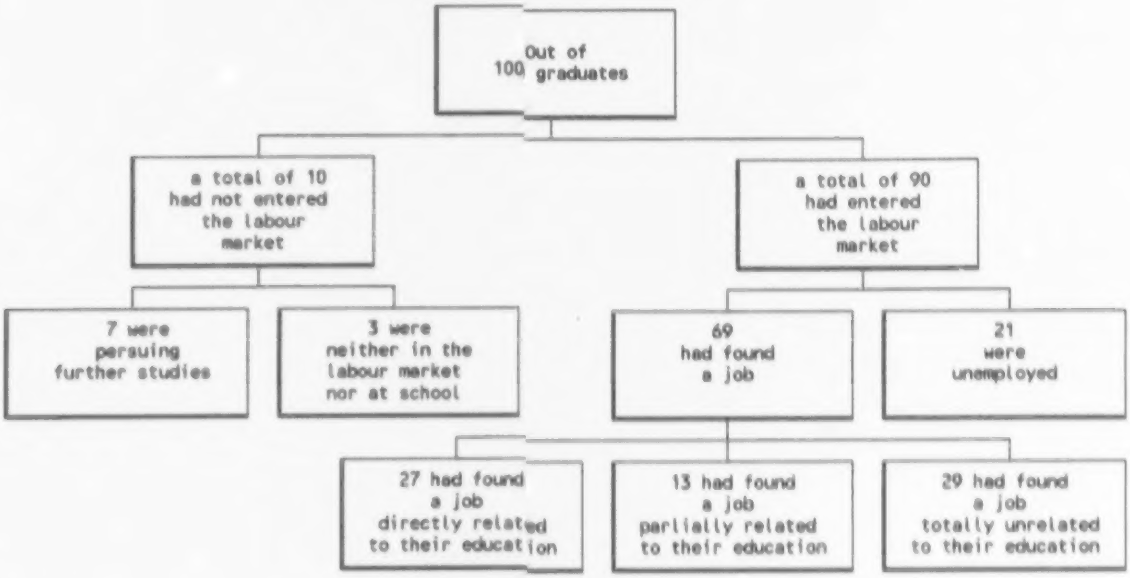
The advanced mechanization of agricultural operations which followed the expansion of farms has boosted demand for workers involved in equipment maintenance and repair. While the requirement for industrial machinery mechanics appears to have been adversely affected by the growing complexity of equipment to the benefit of electronics and robotics specialists, the job prospects for workers in farm machinery and forestry mechanics have increased. Given the recent trend, the employment outlook for the next decade should remain excellent.

AUTOMOBILE MECHANICS

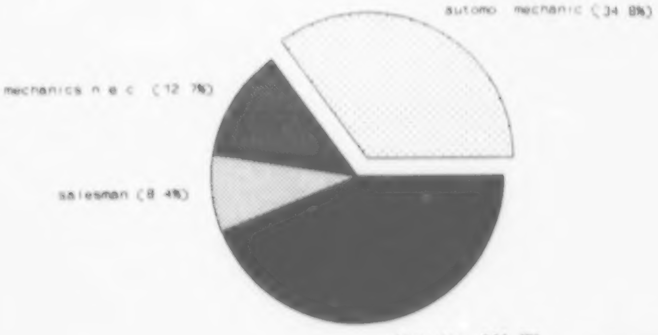
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 10 had not entered the labour market
a total of 90 had entered the labour market
7 were persuing further studies
3 were neither in the labour market nor at school
69 had found a job
21 were unemployed
27 had found a job directly related to their education
13 had found a job partially related to their education
29 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	3110	10.5	---
1985/90	1145	9.9	---
1990/95	735	7.8	---
1995/2000	770	7.8	---

This field of study comprises automobile mechanics, including light and recreational vehicles.

Trends and projections

This vast field of study, which has a very strong concentration of male students, produced some 1,150 graduates annually during the 1985-90 period, thus accounting for nearly 10% of all secondary vocational graduates. Student interest in these disciplines was even more pronounced in the first half of the 1980s when more than 3,100 students graduated each year.

Occupation after graduation

Seven out of ten of the 1987 graduates were employed one year after graduation, a proportion slightly above the average, and 23.7% of the graduates were unemployed. Although the graduates' employment rate was relatively high, more than two-fifths of them were working in jobs that were unrelated to their occupational skills.

Occupational profile

More than 37% of the employed graduates were working as automobile mechanics. Of the other occupational groups related to the graduates' training, industrial machinery mechanics accounted for about 8% of the jobs. Because of the large number of graduates and the very strong percentage of those who hold jobs that are unrelated to their specialty, the employed graduates are working in a large number of occupations and in more than 40 economic sectors. The retail trade sector is predominant, however, accounting for half the jobs.

Salary

Those who succeeded in finding a job earned an average annual salary of $14,000 in 1988 compared to the $13,600 average salary for all the employed 1987 graduates in the secondary vocational sector.

General picture

Over the past decade, the automobile sector has undergone very rapid growth which has drastically affected both the technical skills of workers and the work milieu itself. Among other things, we have seen the almost complete disappearance of neighbourhood mechanics' shops which constituted potential employers for many graduates. The greater complexity of mechanical parts, the increasing use of electronic parts, and the extension of warranties are all factors that have contributed to the concentration of repair and maintenance at dealerships as well as the appearance of specialized shops. The concentration of activities and more sophisticated diagnostic techniques have resulted in a much slower growth rate for mechanics' jobs than the growth of the automobile sector in general.

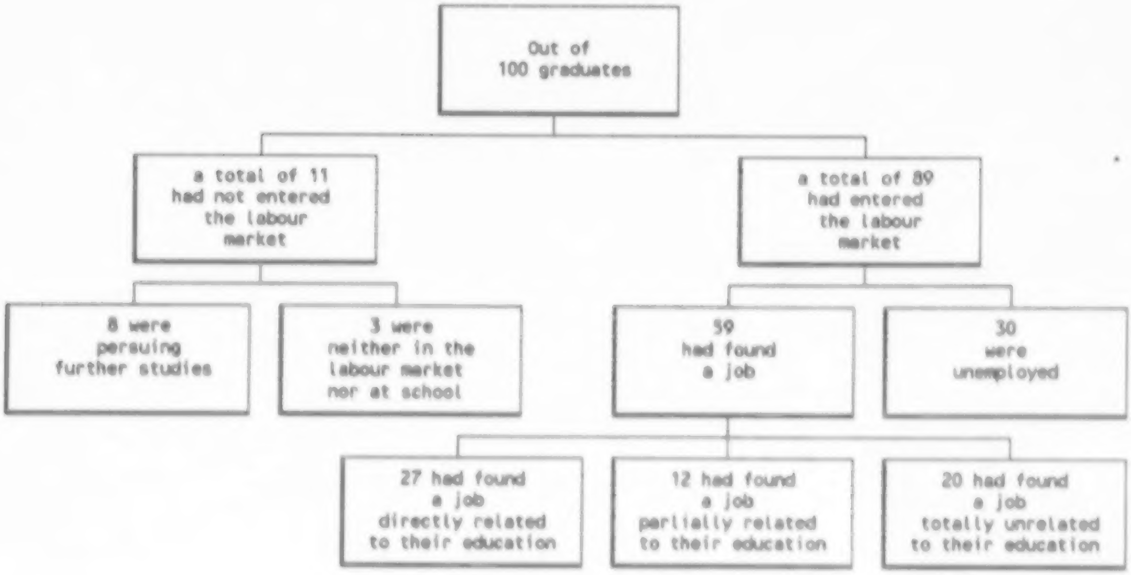
All of these factors should continue to exert an influence over the next few years and will again limit the growth in the demand for these graduates. Nonetheless, the automobile trades will remain numerous and will continue to provide employment opportunities for a large number of mechanics.

AUTOBODY WORK

SECONDARY VOCATIONAL

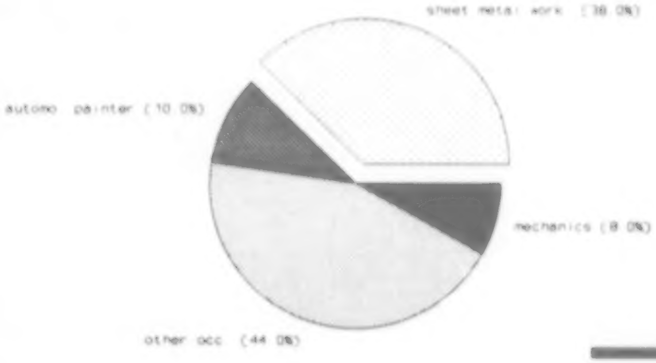
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 11
had not entered
the labour
market
a total of 89
had entered
the labour
market
8 were
persuing
further studies
3 were
neither in the
labour market
nor at school
59
had found
a job
30
were
unemployed
27 had found
a job
directly related
to their education
12 had found
a job
partially related
to their education
20 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	540	1.8	...
1985/90	140	1.2	1.0
1990/95	90	0.9	0.7
1995/2000	90	0.9	0.5

AUTOBODY WORK
SECONDARY VOCATIONAL

This field of study trains students to do autobody work, repairs and repainting.

Trends and projections

About 140 students received a diploma each year during the 1985-90 period, i.e. a drop of more than 75% in relation to an average of more than 540 graduates enrolled in the program during the five previous years. If the autobody work sector continues to produce its recent share of about 1% of all secondary vocational graduates, some 90 students may be expected to graduates each year over the 1990s.

Occupation after graduation

The loss of student interest in this field of study may be explained by the high levels of unemployment shown by recent data. In fact, about one-third of the 1987 graduates were unemployed one year after graduation. Moreover, of the approximately 60% who were employed, more than one-third were working in jobs that were unrelated to their training.

Occupational profile

One of the most related occupations is that of sheet-metal worker, which accounts for nearly 40% of all 1987 graduates. Nearly half of all of these graduates work in the retail sector.

Salary

The average salary earned in 1988 was $13,300, i.e. a salary level just below the average salary reported by all the secondary vocational graduates.

General picture

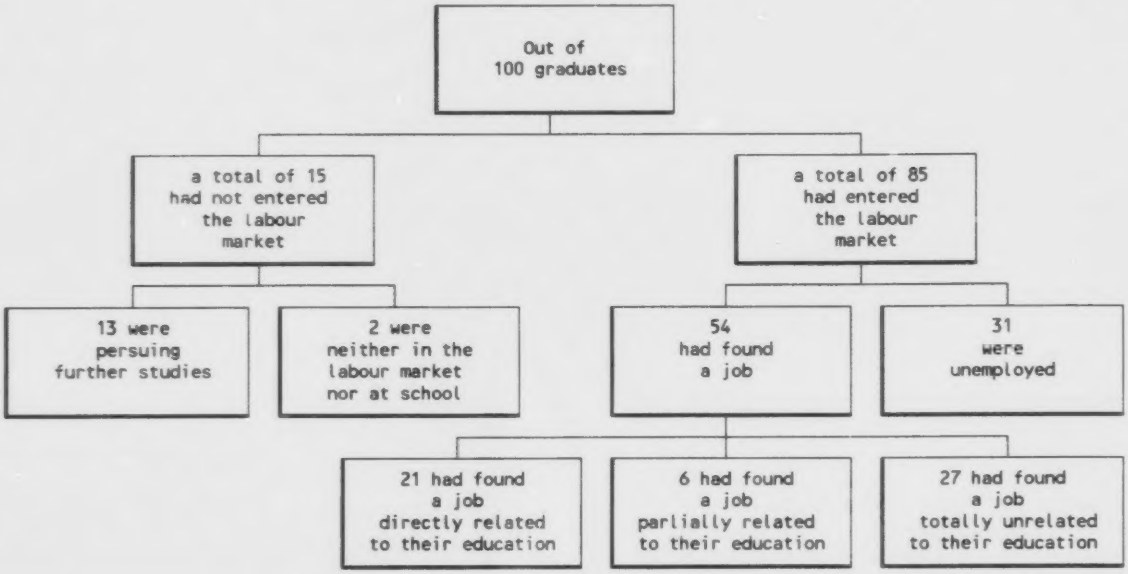
Although fairly stable within painting workshops, the demand for automobile painters was adversely affected in recent years by the automation of painting tasks in automobile manufacturing plants. From the standpoint of autobody work, the high cost of equipment and the greater sophistication of automobiles have had the effect of concentrating car repairs at car dealerships as in the case of automobile mechanics, thus reducing employment opportunities in independent garages.

Over the coming years, the use of new materials and technological equipment should continue the trend towards the concentration of car repairs. The demand is expected to grow at a rather slow rate, thus increasing competition. Candidates with a knowledge of new repair and painting processes should enjoy better employment opportunities. Nonetheless, the overall job prospects for graduates are expected to fall slightly during the 1990s.

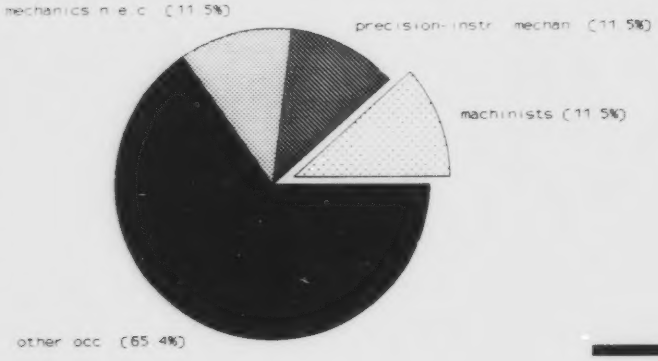
MAINTENANCE MECHANICS **APPLIED SCIENCES**

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 15 had not entered the labour market
a total of 85 had entered the labour market
13 were persuing further studies
2 were neither in the labour market nor at school
54 had found a job
31 were unemployed
21 had found a job directly related to their education
6 had found a job parlially related to their education
27 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	280	0.9	---
1985/90	90	0.8	1.0
1990/95	65	0.7	1.2
1995/2000	70	0.7	1.3

APPLIED SCIENCES

MAINTENANCE MECHANICS
SECONDARY VOCATIONAL

This field of study includes training programs for workers specializing in the maintenance and repair of industrial machinery.

Trends and projections

As for the entire secondary vocational sector, the number of graduates in this discipline dropped considerably over the 1980s to some 90 graduates annually during the second half of the decade.

Occupation after graduation

According to the 1988 Relance Survey, barely more than half of the graduates in this discipline had found jobs one year after graduation. Since only a small proportion of them decided to continue their studies, these graduates were severely affected by unemployment which reached a rate of more than 35% compared to an average of 20% for all the graduates at this level. These graduates found it even harder to enter the labour market since half of the jobs obtained bore no relation to their education and nearly 40% of them were temporary.

Occupational profile

The most directly related jobs held by these graduates were those of mechanics and machinists (35%). A larger proportion of them (40%) had succeeded in finding jobs as workers in the manufacturing and construction sectors.

General picture

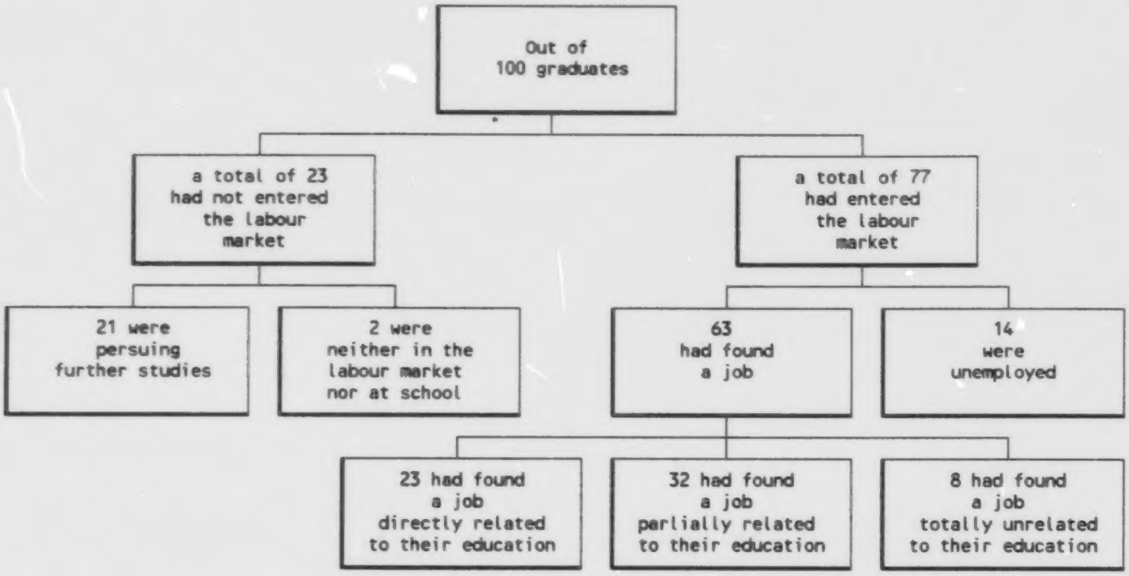
As their placement statistics indicate, these graduates faced much more difficult labour market conditions than the average. These graduates are increasingly being affected by the technological changes in industrial machinery which make the maintenance and repair of industrial machinery much more complex. Thus, the traditional image of the maintenance mechanic as a "jack-of-all-trades" is increasingly being called into question as specific skills in electronics, pneumatics and mechanics are required for repair work, and preventive maintenance is left up to industrial machine operators.

The trend of recent years should accelerate over the next decade when the emphasis will be placed on computer-aided manufacturing technologies. The new version of the education program takes into account new labour market requirements and may help to increase the employability of these graduates.

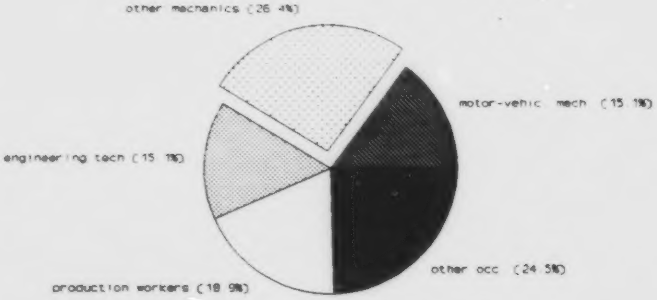
MECHANICAL ENGINEERING TECHNOLOGY **APPLIED SCIENCES**

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 23 had not entered the labour market
a total of 77 had entered the labour market
21 were persuing further studies
2 were neither in the labour market nor at school
63 had found a job
14 were unemployed
23 had found a job directly related to their education
32 had found a job parlially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	120	0.8	---
1985/90	150	1.1	1.0
1990/95	145	1.1	0.6
1995/2000	150	1.1	0.5

APPLIED SCIENCES

MECHANICAL ENGINEERING TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

This group of disciplines includes mechanical engineering, agricultural mechanics and marine mechanics. While mechanical engineering technologies are available in all the regions, the agricultural hydraulics and marine mechanics specialties are concentrated in two establishments, namely the Institut de technologies agro-alimentaires de St-Hyacinthe and the Institut maritime du Quebec in Rimouski.

Trends and projections

From an average of 120 during the first half of the 1980s, the number of graduates reached an annual average of 150 in the second half. This average should con[illegible] through the 1990s if this field maintains the popularity it has enjoyed over the last few years.

Occupation after graduation

As in other engineering technologies, a higher than average proportion of graduates decided to pursue more advanced studies. The availability of university level training leading to an engineering degree offered by the Institut de technologies supérieures is certainly a factor in this decision. Moreover, even if a placement rate of 82% does not indicate labour market difficulties, the less favourable perception of the relation between education and work also helps to explain the desire to pursue a university degree.

Occupational profile

The jobs obtained by these graduates are clearly oriented towards occupational groups that are the most directly linked to manufacturing processes. Of these, mechanics' jobs accounted for at least 36% of entry level jobs. To this already high proportion must be added the group of aircraft assembly specialists which accounted for almost 10% of the jobs held by these graduates. For their part, engineering technicians' jobs accounted for less than 15% of graduates in these technologies.

Salary

As for all other engineering-related technologies, the average salary earned by these graduates was clearly higher than average at $21,700 annually for graduates working full time in the year after graduation.

General picture

Even if placement statistics for occupations related to these disciplines indicate lower than average market entry opportunities, they have nonetheless been favourable over the past few years. This training also enables candidates who wish to do so to complete university studies in engineering by having in hand a graduation diploma that is recognized on the labour market.

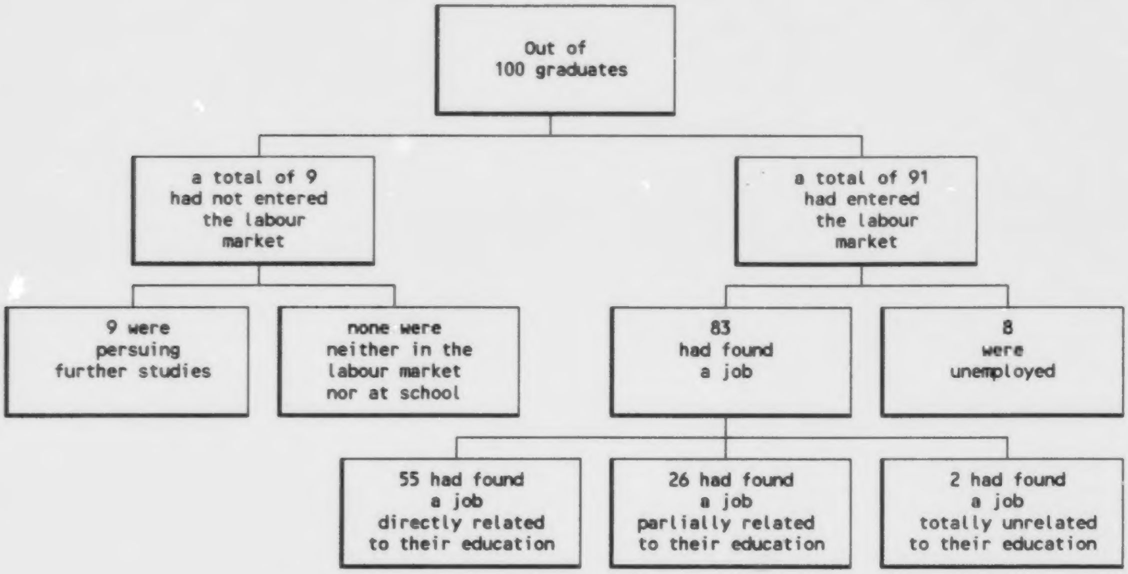
Over the next few years, forecasts of requirement growth in the occupational categories linked to these studies indicate a possible labour surplus that could translate into a shrinking of the market. Although this surplus will likely affect numerous traditionally trained workers, especially maintenance mechanics, they should not affect young graduates who are more familiar with new technologies. The latter will continue to face a labour market where shortages of qualified labour will co-exist with a surplus of less qualified labour.

MECHANICAL ENGINEERING

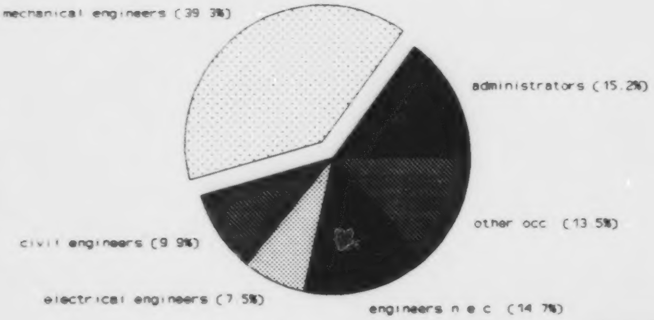
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 9 had not entered the labour market
a total of 91 had entered the labour market
9 were persuing further studies
none were neither in the labour market nor at school
83 had found a job
8 were unemployed
55 had found a job directly related to their education
26 had found a job parlially related to their education
2 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	480	2.2	0.9
1985/90	665	2.7	1.0
1990/95	700	2.7	0.8
1995/2000	700	2.7	0.8

MECHANICAL ENGINEERING
BACHELOR'S DEGREE

Programs in mechanical engineering are offered at Concordia, Laval, McGill, Polytechnique, Sherbrooke and École de Technologie Supérieure. Mathematics, chemistry, physics and biology are required by most universities, while the École de Technologie Supérieure recruits candidates with vocational college diplomas in mechanical engineering.

Trends and projections

During the second half of the 1980s, the proportion of these graduates tended to increase more quickly than the average. In 1980 they accounted for 20% of graduates in all engineering disciplines, while in 1990 they accounted for 30%. During the coming years, the percentage of graduates in this discipline should remain basically the same as in the late 1980s, with an average of 700 graduates a year.

Occupation after graduation

The vast majority of these graduates were employed two years after graduation, and almost all of them held jobs at least partially related too their education. Proportionately more of these graduates had decided to enter the labour market, with only 9% having decided to continue their education.

Occupational profile

According to the 1988 survey, nearly 75% of graduates who were employed two years after graduation had jobs in one of the engineering occupational groups. Mechanical engineers accounted for the largest group, but a large contingent from other engineering specialties indicates that job opportunities are not limited to mechanical engineering graduates. Besides the engineering groups, management positions provided labour market openings in the short term, since approximately 15% of graduates in mechanical engineering held management jobs two years after graduation.

Salary

According to the 1988 survey of graduates, the average annual salary of mechanical engineering graduates working full time was $29,000. This salary level puts these graduates above the average of $26,600 for graduates with bachelor's degrees taken as a whole and compares favourably with other engineering disciplines.

General picture

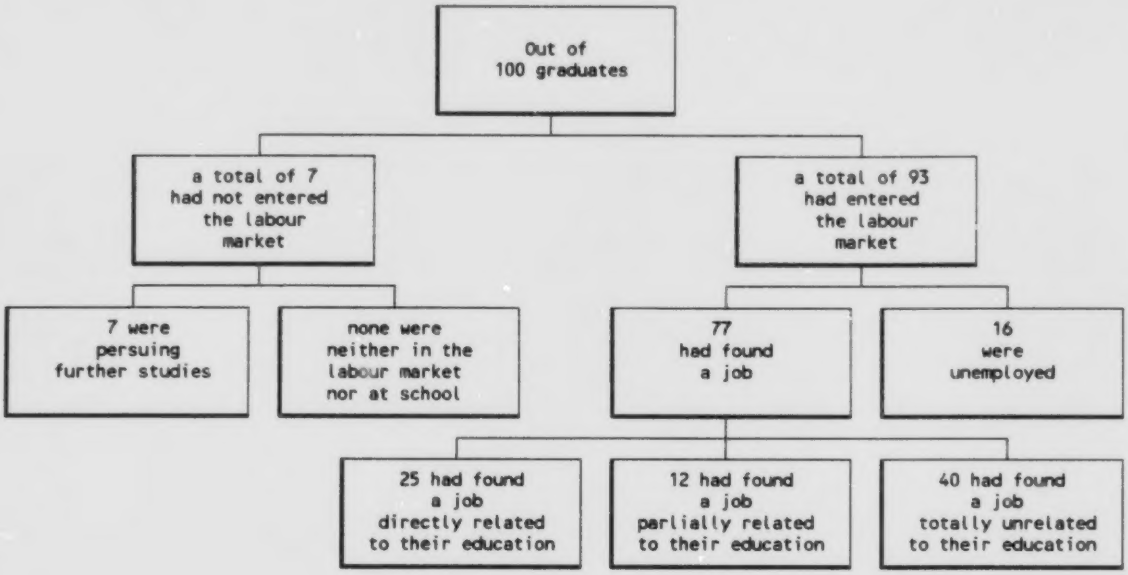
As in engineering disciplines generally, labour market conditions make job entry easier than average for this discipline.

During the past five years, requirements grew more quickly than the number of graduates, thereby improving chances of placement in a job directly related to education. Although the situation is likely to reverse itself during the coming years, requirements will continue to be stimulated by major investment in technology that will be needed to meet international competition. Consequently, prospects should remain excellent throughout the 1990s.

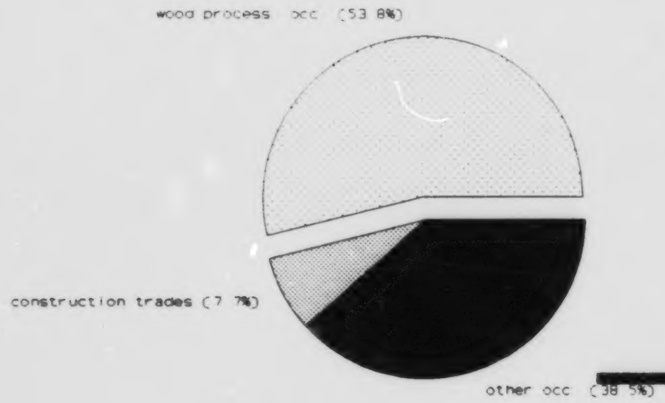
FURNITURE-MAKING
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
7 were persuing further studies
none were neither in the labour market nor at school
77 had found a job
16 were unemployed
25 had found a job directly related to their education
12 had found a job parlially related to their education
40 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	220	0.8	0.1
1985/90	35	0.3	1.0
1990/95	20	0.2	0.5
1995/2000	20	0.2	0.6

APPLIED SCIENCES

FURNITURE-MAKING
SECONDARY VOCATIONAL

This field of study includes various programs dealing primarily with the manufacture, repair, finishing or upholstery of furniture and the molding and stratification of reinforced plastic furniture.

Trends and projections

The furniture programs have been literally deserted by students over the years. From an average of nearly 220 graduates annually during the 1980-85 period, and a high of more than 350 in the 1982 recessionary year, this number dropped to an average of some 35 graduates per year in the second half of the decade. This decline, which is much more pronounced than that of the secondary vocational sector taken as a whole, caused the relative share of secondary-school graduates to fall from nearly 0.7% to less than 0.3%. There is reason to believe that the lost ground will not be regained and that, on the contrary, this sector may even shrink slightly during the 1990s.

Occupation after graduation

More than three-quarters of the 1987 graduates in the furniture-making program were employed in 1988, representing an above-average proportion. Moreover, most of the graduates had permanent full- time positions. This performance, however, is dimmed by the fact that more than half of them were working in jobs unrelated to their area of specialization, while this proportion was only one-third for graduates taken as a whole.

Occupational profile

Various occupations related to woodworking, such as wood sawyers and sanders, cabinetmakers, lathe and milling machine operators and inspectors and workers in the wood manufacturing industry accounted for slightly more than half of the employed graduates. The wood and furniture industries are clearly the principal employers of graduates who succeed in finding a job related to their training.

Salary

The average annual salary of employed graduates was $14,000, a level slightly above the average.

General picture

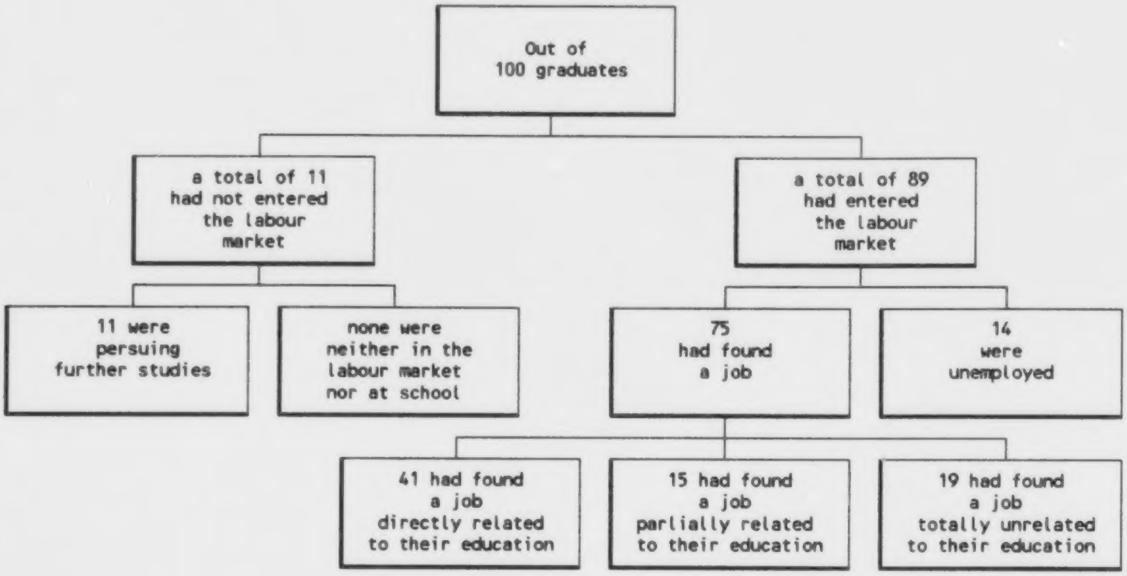
Over the past few years, placement in related occupations has been lower than the average for other disciplines at the secondary level. Again, the growing mechanization of furniture manufacturing operations is increasingly changing the qualifications sought by industrial establishments. Employers are primarily looking for specialized operators of machines that are often computer-controlled, rather than traditional cabinetmakers. In this respect, college graduates in manufacturing technology may be serious competitors for these jobs. Even if until now their number has been very small, college graduates for their part seem to enjoy better market entry conditions.

In the short term, job opportunities may be further dimmed by the economic slump in Quebec's furniture industry. This industry is being adversely affected, with a delay of one or two years, by residential construction which experienced some difficulties in 1989 and 1990.

MACHINING
SECONDARY VOCATIONAL

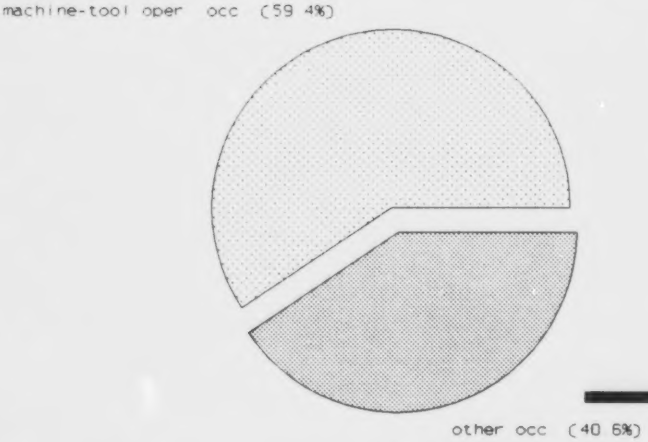
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 11 had not entered the labour market
a total of 89 had entered the labour market
11 were persuing further studies
none were neither in the labour market nor at school
75 had found a job
14 were unemployed
41 had found a job directly related to their education
15 had found a job partially related to their education
19 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1570	5.3	0.1
1985/90	485	4.2	1.0
1990/95	380	4.0	0.8
1995/2000	400	4.0	0.8

MACHINING
SECONDARY VOCATIONAL

This field of study involves occupations related to machine-tool operation including the jobs of tool and die maker and plastic molder-stratifier.

Trends and projections

The decline in secondary vocational school enrolment affected these disciplines in particular as the number of their graduates dropped by more than two-thirds. Despite the significant drop in enrolment, these disciplines are among the most popular, accounting for more than 40% of secondary vocational graduates.

Occupation after graduation

Three out of four graduates were employed one year after graduation. Some 10% of graduates in this field had decided to continue their studies. The unemployment rate for these graduates was 15%, i.e. a smaller proportion than the 20% unemployment rate for their colleagues in other disciplines. The jobs obtained were more clearly related to education than the average. In fact, three-quarters of employed graduates felt they held jobs that were at least partially related to their training. More than 95% of them held full-time jobs.

Occupational profile

Nearly 60% of the positions held by these graduates were machining jobs. Of these, the machinists' group was by far the largest with about 55% of the jobs. Most of the remaining jobs were closely related to production in manufacturing plants.

Salary

The average annual salary of graduates working full time was $16,700 one year after graduation.

General picture

In recent years, these graduates have enjoyed above-average employment opportunities. One of the reasons for this is the vigorous growth of the main sectors providing employment for these graduates, particularly the transportation equipment, metal products, machinery and plastics industries. Shortages of qualified machinists and plastic molders have also favoured the entry of these graduates into the labour market in the same manner as their colleagues in mechanical manufacturing at the college level.

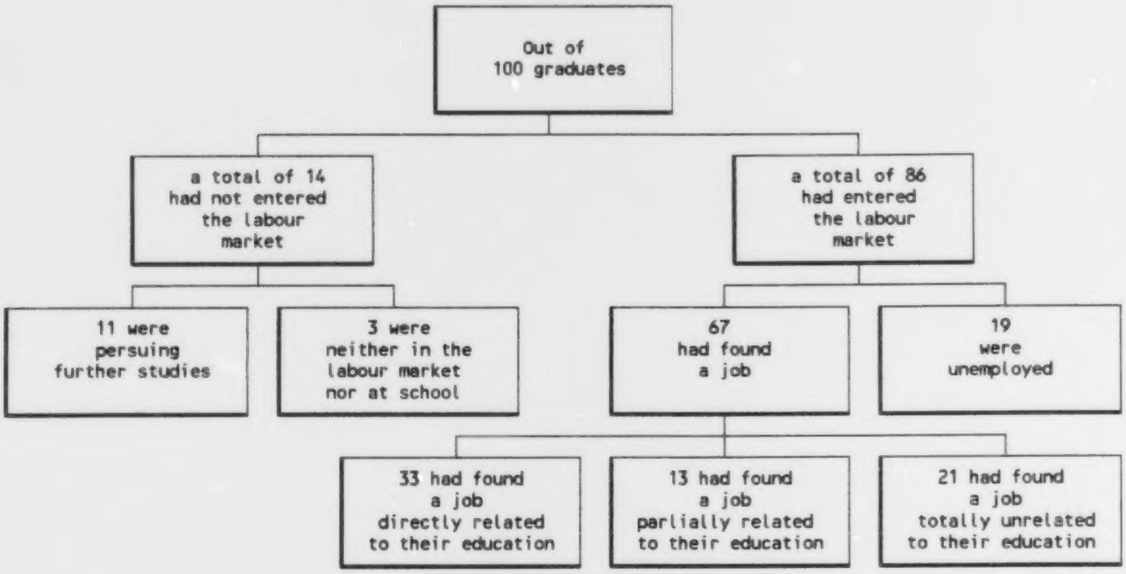
Over the next few years, a somewhat tighter labour market is expected primarily because of the slower growth of manufacturing jobs. The increase in the number of machinists will also continue to be adversely affected by the more intensive introduction of computer-aided manufacturing processes which tend to eliminate opportunities for machinists with intermediate skills in favour of machinists with a knowledge of digitally-controlled machine tools. Candidates with these skills will face a better than average employment outlook.

METALLURGY

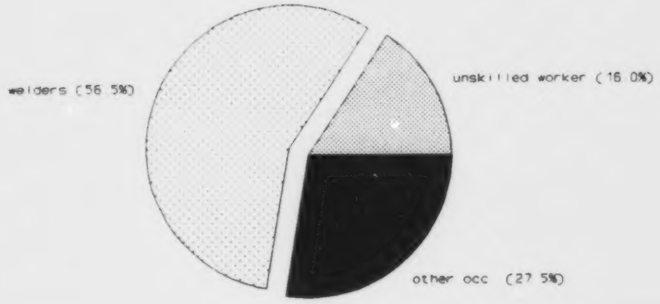
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 14
had not entered
the labour
market
a total of 86
had entered
the labour
market
11 were
persuing
further studies
3 were
neither in the
labour market
nor at school
67
had found
a job
19
were
unemployed
33 had found
a job
directly related
to their education
13 had found
a job
partially related
to their education
21 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	940	3.2	---
1985/90	325	2.8	1.0
1990/95	240	2.6	0.5
1995/2000	255	2.6	0.3

METALLURGY
SECONDARY VOCATIONAL

This field of study includes programs in welding, sheet-metal mechanics and metal construction.

Trends and projections

This vast field of study, which trained an average of some 940 graduates each year in the first half of the 1980s, recently recorded a more modest performance with an estimated 325 graduates annually during the 1985-1990 period. Nonetheless, it remains one of the most popular fields of study, with nearly 3% of all graduates. Given the trend of the past few years, the number of graduates is expected to drop to about 240 to 250 annually over the next ten years.

Occupation after graduation

Both the 67% employment rate and the 19% unemployment rate correspond to the average of secondary vocational graduates taken as a whole. Almost all the workers had full-time jobs and two-thirds of them held jobs that required qualifications directly or partially related to their occupational skills.

Occupational profile

Only one occupational group, that of welders, accounted for nearly half the jobs held by graduates in this field of study. In terms of industrial sectors, one-quarter are concentrated in the metal products sector and about 10% in the transportation material and construction sectors.

Salary

Employed graduates reported a salary of about $15,600, i.e. $2,000 more than the average salary of employed secondary vocational graduates taken as a whole.

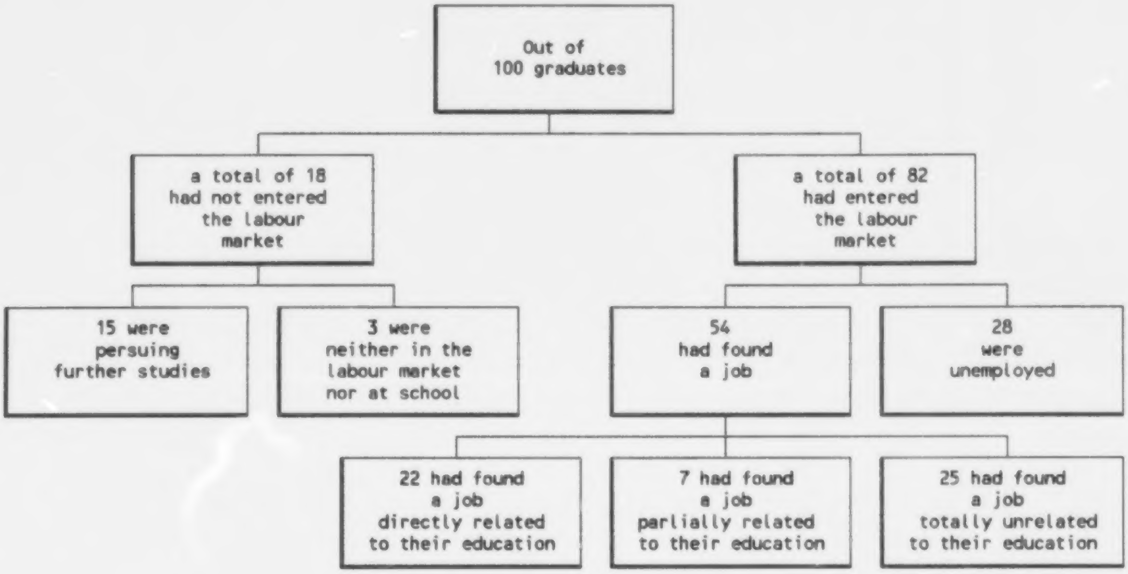
General picture

Although the overall employment opportunities for these graduates are comparable to the average, demand for these professionals tends to fluctuate considerably. In the manufacturing industries, where production takes place in a series of steps, welding tasks are among those that can most easily be automated, thus reducing demand for these workers. Other industries that are less centred on serial production are less likely to automate their operations. Nonetheless, their requirements with respect to task precision or related skills in blueprint reading are generally higher. This is notably the case for welders-assemblers and those working in the construction sector.

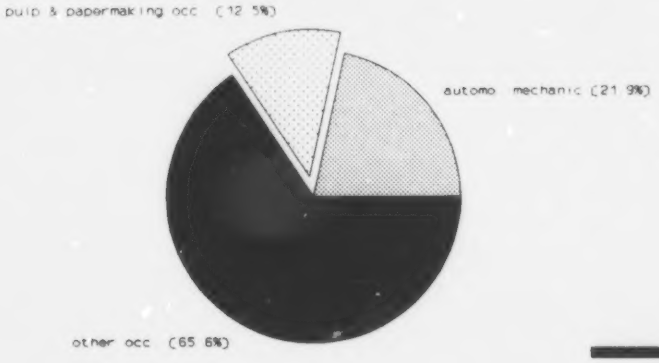
INDUSTRIAL WORK
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 18 had not entered the labour market
a total of 82 had entered the labour market
15 were persuing further studies
3 were neither in the labour market nor at school
54 had found a job
28 were unemployed
22 had found a job directly related to their education
7 had found a job parlially related to their education
25 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	95	0.3	0.1
1985/90	60	0.5	1.0
1990/95	50	0.5	0.6
1995/2000	50	0.5	0.6

INDUSTRIAL WORK
SECONDARY VOCATIONAL

This field of study includes training in the operation of industrial production machinery and stationary steam engines and assembly-line work.

Trends and projections

Like the entire vocational sector, enrolment in this field declined over the 1980s. Nonetheless, this downtrend has been less pronounced in these disciplines which saw their number of graduates increase somewhat.

Occupation after graduation

Most graduates entered the labour market after graduation. Their placement rate was well below the average, which translated into a high unemployment rate of nearly 35%. Only a small number of the jobs obtained were related to education. Thus, 53% of young employed graduates considered their jobs to be at least partially related to their education compared to a proportion of 65% for secondary professional graduates overall.

Occupational profile

Jobs related to manufacturing, assembling and repair of manufactured products represented at least 67% of the jobs obtained by these graduates. Most of them were working as unskilled workers (29%) but a high proportion (22%) held jobs as car mechanics.

Salary

Despite the low placement rate reported by these graduates, the average income of survey respondents working full time was $18,500 one year after graduation, representing a higher salary level than that of secondary vocational graduates taken as a whole.

General picture

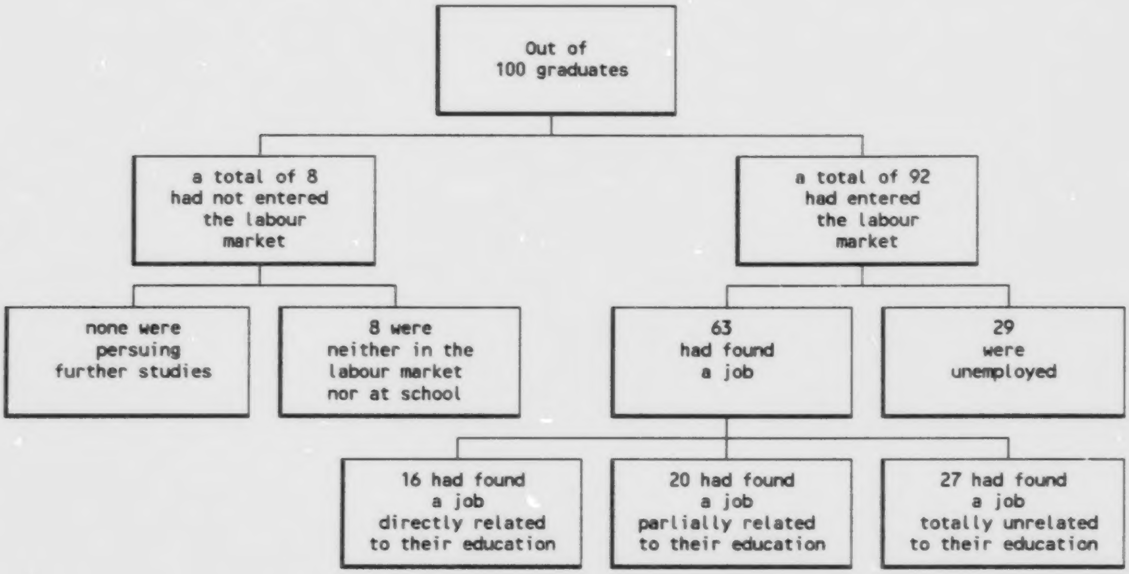
Graduates in these disciplines faced more difficulties in entering the labour market than their colleagues in other fields of training. As a large proportion of entry-level jobs are not very specialized, these graduates risk being adversely affected by technological changes which will introduce changes in production equipment and increase the qualification requirements for industrial machine operators. During the coming decade, employment prospects for these graduates should remain below the average of other disciplines at the secondary level.

PRIMARY INDUSTRIES

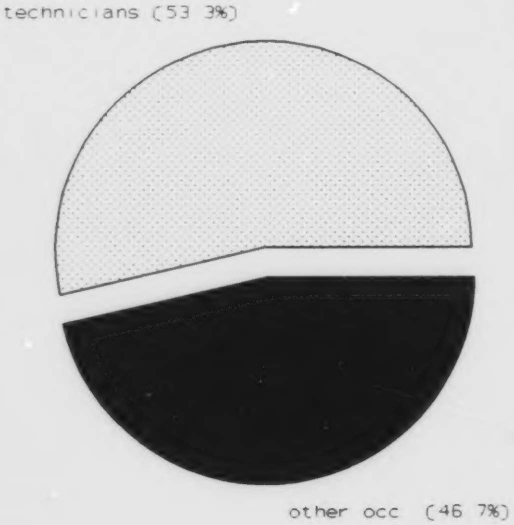
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 8 had not entered the labour market
a total of 92 had entered the labour market
none were persuing further studies
8 were neither in the labour market nor at school
63 had found a job
29 were unemployed
16 had found a job directly related to their education
20 had found a job parlially related to their education
27 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	75	0.5	0.1
1985/90	30	0.2	1.0
1990/95	20	0.2	1.0
1995/2000	20	0.2	0.9

APPLIED SCIENCES

PRIMARY INDUSTRIES
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses disciplines related to the development of mineral and marine resources. These disciplines are taught primarily in four regions, namely the Abitibi and Mauricie- Bois-Francs regions for mineral development and the North Shore and Gaspé regions for marine resources.

Trends and projections

After peaking during the 1983-1985 period, the number of graduates returned to its usual level of 25 to 40 graduates annually.

Occupation after graduation

The participation rate in the labour market remained high even though placement was lower than average. These two combined factors resulted in a high unemployment rate among these graduates of 31.5% of the labour force on the market. The situation appeared all the more difficult since barely 17% of them held a job that was directly related to their education, compared to 45% for other graduates, and since 60% of the jobs were at least partially related. The seasonal slowdown in the fishing sector and in prospecting activities at the time of the Relance Survey partly explains the difficult situation described by the data. Opportunities for temporary jobs may be added to permanent jobs at other times during the year.

Occupational profile

About 45% of employed graduates held jobs as technicians in the fields of biology, physics or engineering. This last category includes the occupations of geophysical prospecting surveyor, geological draughtsman/woman and mining technicians. Occupations related to fishing did not figure in the occupational profile of these graduates. Mining industries specializing in services to companies provided graduates with the most employment opportunities, with 35% and 25% of the jobs offered.

General picture

In general and despite greater opportunities at other times during the year, the employment outlook for these graduates seemed appreciably more difficult than for the average of the other vocational college graduates. Although mining has resumed in Abitibi, employment levels remain somewhat depressed in the non-metallic mining sector. On the other hand, these graduates must face competition from their university counterparts in geological sciences who have an easier time getting jobs as physical science technicians because of difficult market entry conditions.

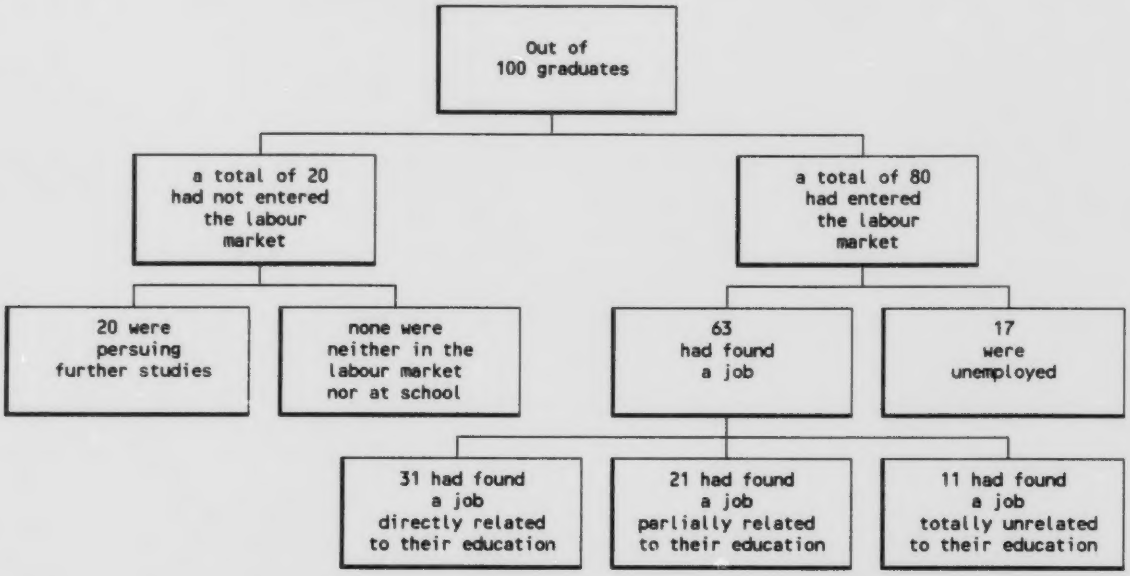
Given the expected growth in the demand, the outlook for entering the labour market for these graduates over the next few years should remain more or less the same as at present. In these circumstances, they will continue to face a less favourable than average labour market.

RESOURCE PROCESSING TECHNOLOGIES

APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation



Out of 100 graduates

a total of 20 had not entered the labour market

a total of 80 had entered the labour market

20 were persuing further studies

none were neither in the labour market nor at school

63 had found a job

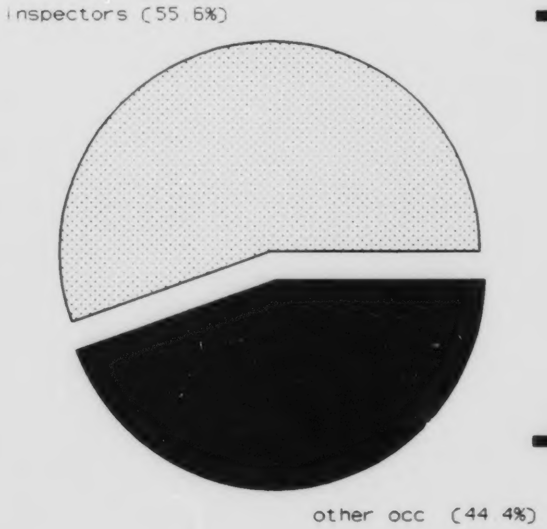
17 were unemployed

31 had found a job directly related to their education

21 had found a job partially related to their education

11 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	0.4	---
1985/90	65	0.4	1.0
1990/95	60	0.5	0.8
1995/2000	65	0.5	0.9

RESOURCE PROCESSING TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses disciplines oriented towards the teaching of manufacturing production technology linked to agricultural and marine (food technologies) and forestry resources (wood and paper). Teaching institutions that offer these disciplines are usually located in the regions that exploit these natural resources, namely Abitibi, Mauricie-Bois-Francs and Quebec City for forestry products, the Gaspé for marine products and the Montérégie for food technologies.

Trends and projections

The number of graduates in these disciplines did not exceed 100 during the 1980s.

Occupation after graduation

According to the 1988 Relance Survey, a proportionally smaller number of graduates who entered the labour force after graduation found jobs. However, the jobs were related to education,for the most part.

Occupational profile

About 80% of the jobs available to these graduates were related to processing operations while the jobs of technician were more or less absent from their occupational profile. Thus, more than 55% of employed graduates were working as product quality inspectors in the food or paper sector. Food processing companies provided the most opportunities, with 65% of the job openings; pulp and paper followed with 20% of the openings.

General picture

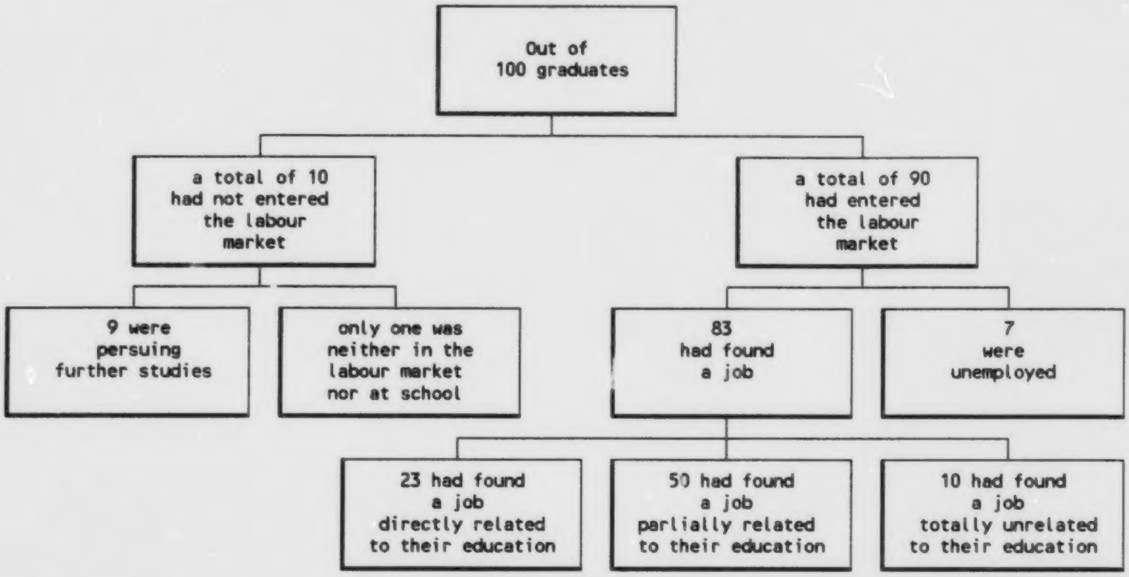
Graduates in these disciplines are restricted to a relatively limited number of occupations and sectors of activity. While limiting the occupational mobility of graduates to a certain extent, this specialization allows a closer link between potential employers and teaching institutions and a better identification of the industry's needs. The industry therefore has easier access to this specialized labour pool when recruitment requirements arise. For this reason, employment opportunities in these disciplines should remain comparable to the average over the next decade.

INDUSTRIAL ENGINEERING TECHNOLOGIES

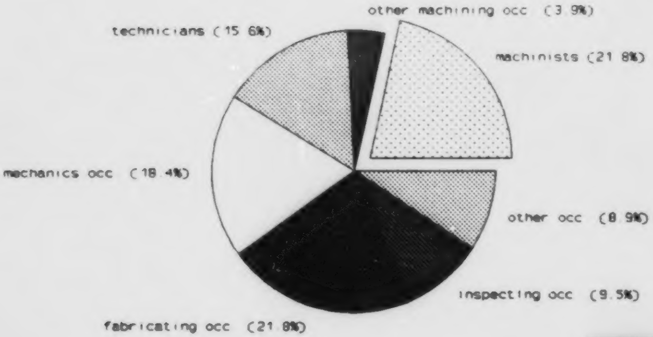
VOCATIONAL COLLEGE DIPLOMA

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 10 had not entered the labour market
a total of 90 had entered the labour market
9 were persuing further studies
only one was neither in the labour market nor at school
83 had found a job
7 were unemployed
23 had found a job directly related to their education
50 had found a job partially related to their education
10 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	365	2.5	0.1
1985/90	325	2.3	1.0
1990/95	300	2.3	0.8
1995/2000	310	2.3	0.7

INDUSTRIAL ENGINEERING TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses disciplines that provide training for technicians oriented towards industrial production. This field includes the technologies of plastics processing, production and manufacturing, quality control, metallurgical processes and mechanical manufacturing.

Trends and projections

After a rapid growth very early in the decade, the number of graduates increased at a rate comparable to the average. Thus, during the 1980s, these disciplines accounted for 2.3% of the graduates in the vocational college sector. If this trend continues over the 1990s, an average of 300 students will graduate each year.

Occupation after graduation

As for all other engineering technologies at the college level, the participation rate of these graduates was higher than that of the vocational college sector taken as a whole. Entry into the labour market was not too difficult for these graduates since 92% of those who did not continue their studies were employed one year after graduation. Their jobs were also more often related to their education even if according to the graduates this relation was more often than not indirect. Almost all the jobs obtained were permanent and full time.

Occupational profile

About 45% of employed graduates were working in jobs related to manufacturing operations or support. Of these, the most common were jobs related to aircraft assembly and those of mechanics and machinists which accounted for 11%, 19% and 22% respectively of the entry-level jobs. The jobs of technicians, whose tasks are more oriented towards design support, were less numerous but nonetheless provided more than 15% of these graduates with jobs.

Salary

The average income of graduates who were working full time one year after completing their studies was $22,600 in 1988.

General picture

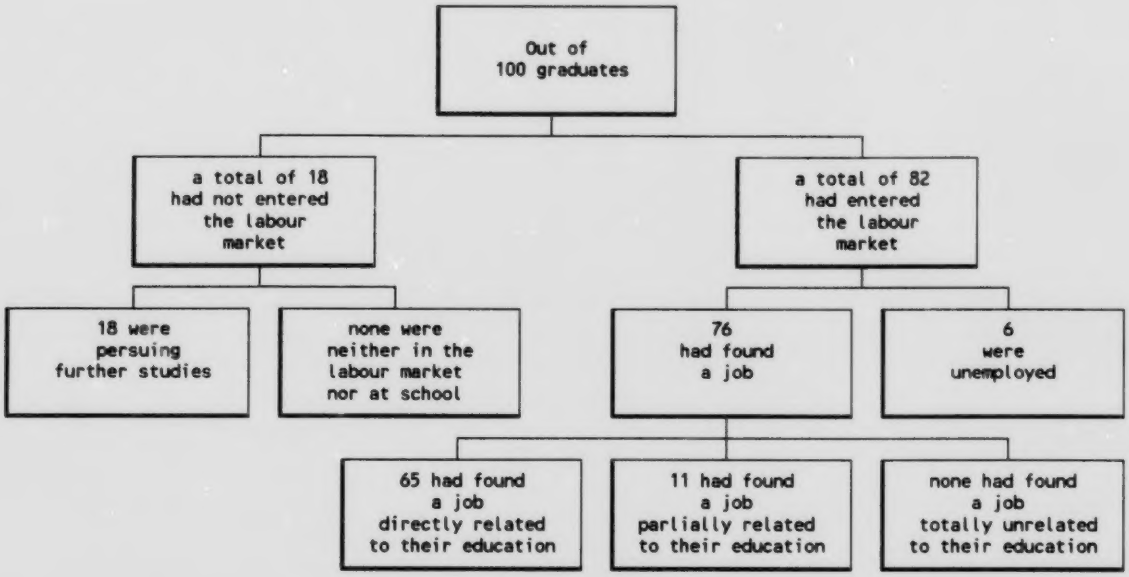
After the 1981-82 recession, the increase in employment opportunities was a boon to these graduates and job prospects improved appreciably. Over the next few years, the requirement in related occupations should grow to a smaller extent. However, the introduction of new technologies will continue to favour workers who have the new required skills. In this respect, young people trained in the new technologies will have a marked advantage over other candidates. This advantage should make it possible to maintain excellent employment opportunities.

CHEMICAL ENGINEERING

BACHELOR'S DEGREE

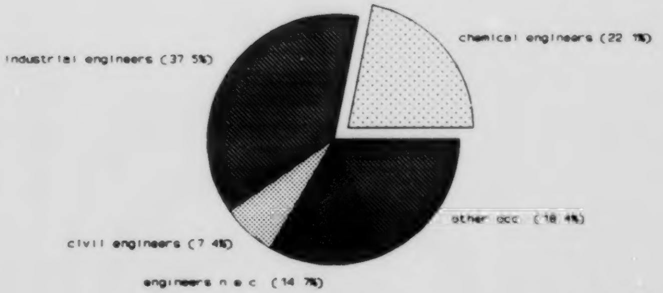
APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 18 had not entered the labour market
a total of 82 had entered the labour market
18 were persuing further studies
none were neither in the labour market nor at school
76 had found a job
6 were unemployed
65 had found a job directly related to their education
11 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	130	0.6	---
1985/90	170	0.7	1.0
1990/95	175	0.7	0.3
1995/2000	175	0.7	0.4

CHEMICAL ENGINEERING
BACHELOR'S DEGREE

Laval, Sherbrooke, Polytechnique and the Trois-Rivières campus of the University of Quebec offer programs in chemical engineering. Mathematics, physics, chemistry and biology are prerequisites.

Trends and projections

The number of graduates in this discipline grew at a rate comparable to the average for bachelor's degrees during the 1980s. If this trend continues during the coming years, an average of 175 students will graduate in this discipline every year up to the year 2000.

Occupation after graduation

As in the case of other engineering disciplines, the labour market participation rate of these graduates is significantly higher than for graduates with bachelor's degrees taken as a whole. Moreover, the placement rate is quite comparable to that for other engineering disciplines. Two years after graduation, the unemployment rate was low, and most employed graduates were working in occupations at least partially related to their education.

Occupational profile

More than 80% of graduates working two years after graduation held jobs in one or another of the engineering groups. The group of chemical engineers accounts for more than 20% of jobs, but even more of these graduates were working as industrial engineers (35%). Fewer graduates in this specialty than in other engineering disciplines worked in the administrators group.

Salary

The average salary ($31,700) of respondents to the 1988 survey who were working full time two years after graduation was markedly above the average for graduates with bachelor's degrees taken as a whole.

General picture

The labour market for these graduates over the past five years has offered job opportunities very much better than the average. Requirements, which had dropped drastically during the recession in the early 1980s, especially in the chemical and oil industries, moved back to previous levels during the second half of the decade. A proportion much greater than average said they were very satisfied, and nearly 90% said they would make the same academic choice if they had to start over.

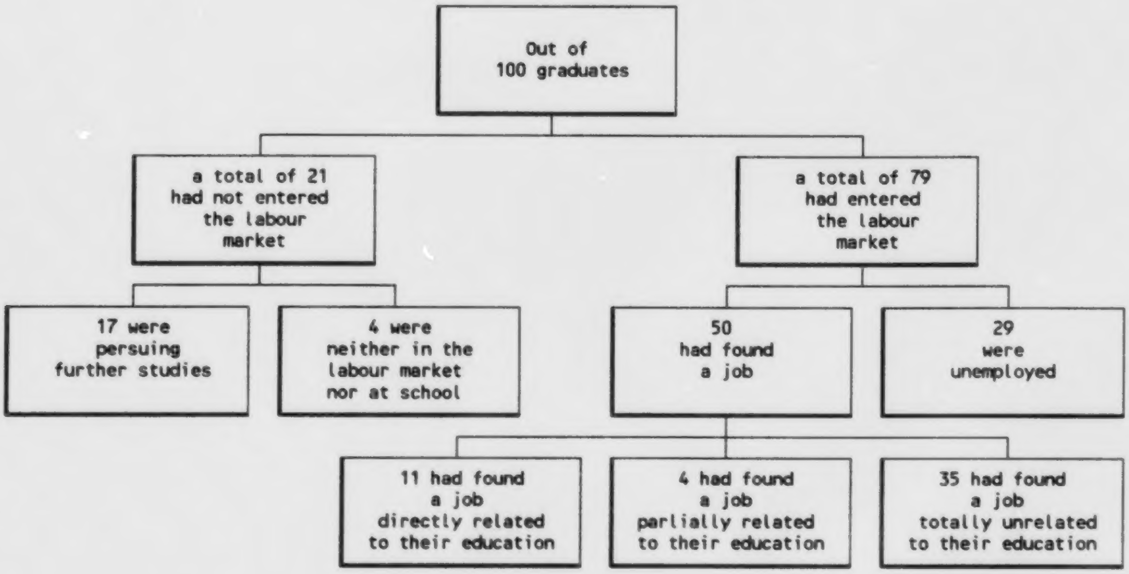
During the 1990s, the market is expected to tighten up somewhat, as requirements drop, especially during the first half of the decade. Prospects should nevertheless be better for future graduates in this field of study than for graduates with bachelor's degrees in most other disciplines.

FORESTRY

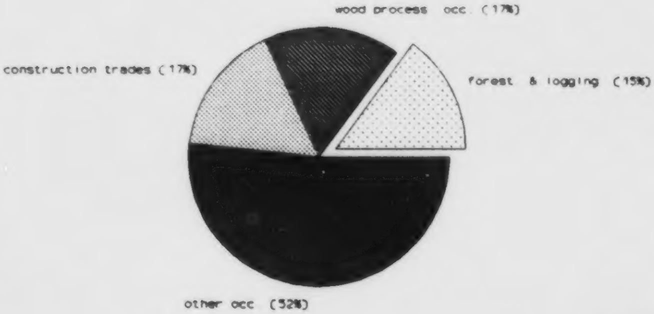
SECONDARY VOCATIONAL

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
17 were persuing further studies
4 were neither in the labour market nor at school
50 had found a job
29 were unemployed
11 had found a job directly related to their education
4 had found a job parlially related to their education
35 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	435	1.5	---
1985/90	180	1.6	1.0
1990/95	205	2.2	0.3
1995/2000	215	2.2	0.3

FORESTRY
SECONDARY VOCATIONAL

The various forestry specialties are designed to train woods workers, wildlife conservation officers, forest rangers, grader-scalers or sawyer-graders.

Trends and projections

Like most secondary vocational fields of study, forestry has experienced a significant decline in enrolment over the past few years. While an average of nearly 400 students graduated each year during the first half of the last decade, this number dropped to about 200 in the second half, and may remain more or less at this level over the coming decade.

Occupation after graduation

The situation of forestry graduates is not very promising. In the year after graduation, only 50% of the graduates succeeded in finding work, and less than one-third held jobs directly or partially related to their education. More than one-fifth of these jobs were temporary. Finally, nearly three out of ten graduates were unemployed compared to one out of six for secondary vocational graduates taken as a whole.

Occupational profile

Despite the relatively small proportion of those employed, forestry graduates can be found in a large number of occupations. In fact, the class of 1987 is working in 31 different occupations. Nonetheless, when the graduates are considered as a whole, three main job categories can be identified, each accounting for 15% of employed graduates. The first includes forest-related occupations, the second, jobs in the wood sector and the third, jobs in the construction sector.

Salary

One year after graduation, the average annual salary of graduates in the field of forestry who were working full time was about $14,500, i.e. $1,000 more than the average salary earned by secondary vocational graduates.

General picture

The placement statistics for these graduates are dimmed considerably by the fact that the graduate survey was conducted in the spring, a time of year when forestry activity is at its lowest level. Seasonal jobs may therefore be added at other times of the year. Nonetheless, these graduates are adversely affected by competition from college graduates in forest technology. Although the latter also have difficulty entering the labour market, they can more easily capitalize on the fields of expertise of secondary-school graduates.

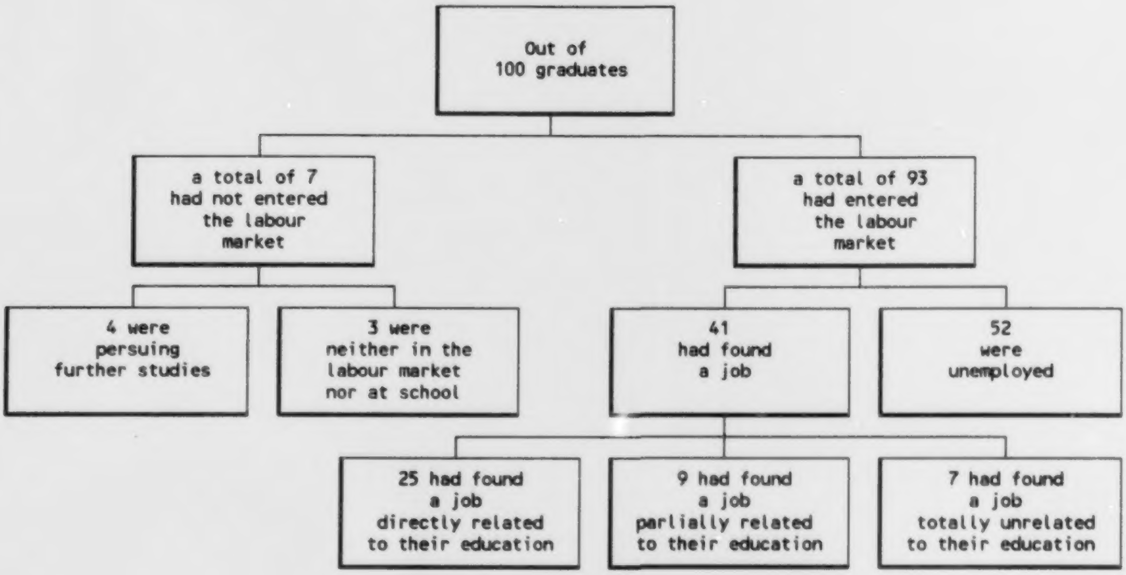
In general, the advanced mechanization of forestry operations appears to be greatly decreasing the requirement in related jobs. Nevertheless, reforestation policies and greater concern about forest management constitute positive factors. The market situation during the 1990s is expected to remain comparable to that of recent years.

FORESTRY TECHNOLOGY

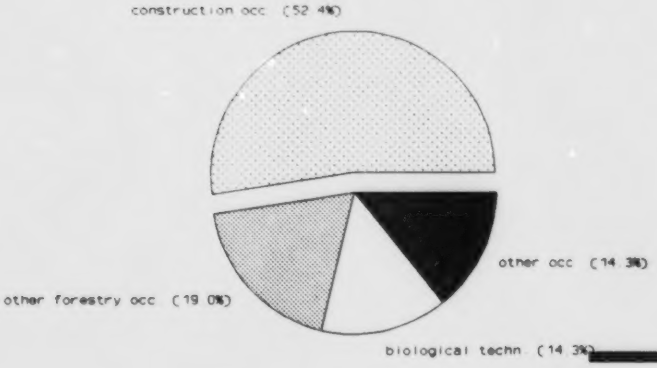
VOCATIONAL COLLEGE DIPLOMA

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 7
had not entered
the labour
market
a total of 93
had entered
the labour
market
4 were
persuing
further studies
3 were
neither in the
labour market
nor at school
41
had found
a job
52
were
unemployed
25 had found
a job
directly related
to their education
9 had found
a job
partially related
to their education
7 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	150	1.0	---
1985/90	115	0.8	---
1990/95	105	0.8	---
1995/2000	110	0.8	---

FORESTRY TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

The programs of study in forest management and forest harvesting are offered in a rather limited number of institutions located primarily in the Lower St. Lawrence, North Coast, Gaspé, Quebec City and Saguenay-Lac St-Jean regions.

Trends and projections

The number of graduates in these disciplines increased at a faster than average rate over the 1977-1982 period. Subsequently, their popularity slumped while the declining number of graduates in these disciplines preceded the drop in graduates at the college level taken as a whole by two years.

Occupation after graduation

The presence of these graduates on the labour market was very strong since 93% of them were employed at the time the Relance Survey was conducted, despite a disastrous unemployment rate of 55.9%. At barely 40%, the placement rate for this discipline was one of the lowest in the vocational college sector. These rather negative statistics should nonetheless be attenuated by the fact that this survey was carried out in the spring, a time of year when forestry activity is at its lowest level. Thus, the employed respondents were those who had found permanent jobs. In the summer and fall temporary jobs are available which provide job opportunities for a greater number of graduates.

Occupational profile

The large majority of graduates who were employed at the time of the survey were working in the forestry sector (70%), in the forestry industry (58%) or in the public service (13%). More than 50% of them held jobs as conservation workers. The occupation of biology technician also provided a possible means of entry into the labour market.

Salary

The average salary of respondents to the survey who were working full time one year after completing their studies was $20,900 in 1988.

General picture

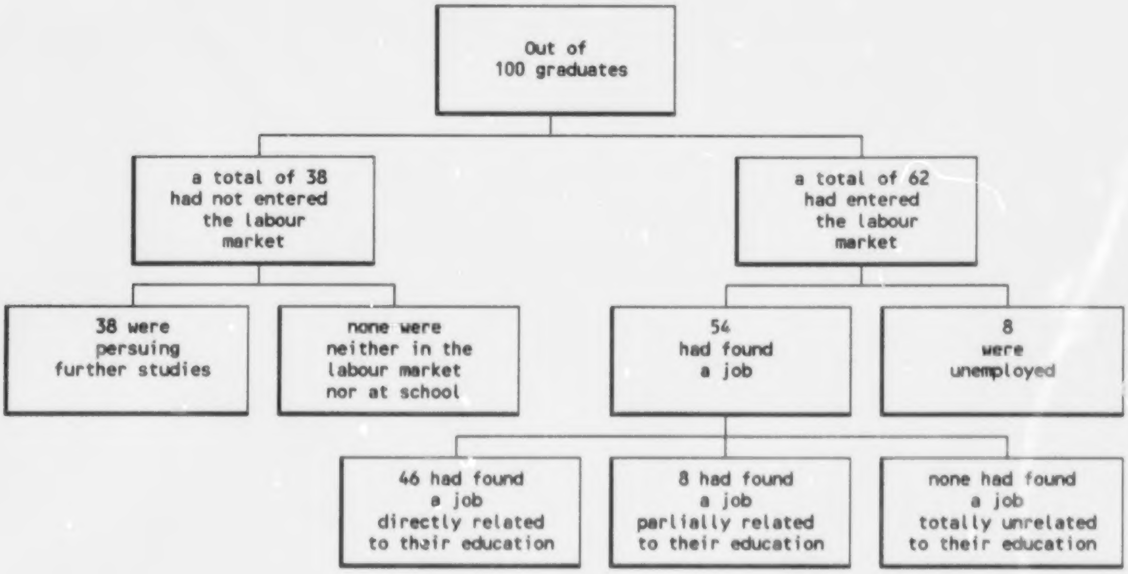
The statistics on these graduates' entry into the labour market are among the poorest in the vocational college sector. These statistics, however, are only an indication of permanent employment opportunities and do not reflect actual opportunities for seasonal work during peak periods in the forestry sector (summer, fall, winter). These workers are also concentrated in regions that are the most affected by unemployment, which greatly reduces the variety of jobs available, as evidenced by the occupational profile of the graduates.

Reforestation policies and greater concern about forest management on the part of governments and private corporations will constitute growth factors for these professionals over the next decade. Despite increased demand, the seasonal nature of work in this sector will remain an important aspect. The same is true for most activities based on the development of natural resources.

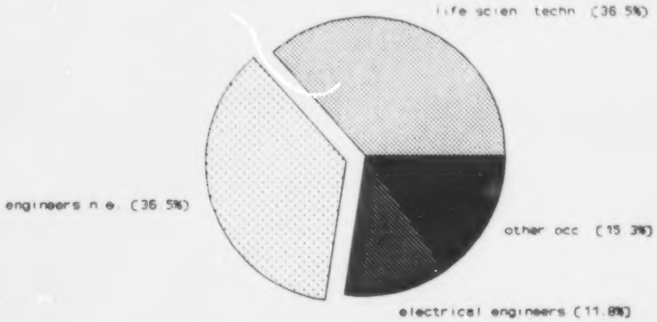
FORESTRY
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 38 had not entered the labour market
a total of 62 had entered the labour market
38 were persuing further studies
none were neither in the labour market nor at school
54 had found a job
8 were unemployed
46 had found a job directly related to thair education
8 had found a job parlially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	0.4	1.0
1985/90	80	0.3	1.0
1990/95	90	0.4	1.0
1995/2000	90	0.3	1.0

FORESTRY
BACHELOR'S DEGREE

This group of fields of study comprises forestry engineering, landscape architecture, silviculture, forest management and other forestry sciences. Laval University offers various programs in forestry, and the University of Montréal offers a bachelor's degree in landscape architecture. In addition to a Diploma of Collegial Studies, mathematics, chemistry, physics and biology are prerequisites.

Trends and projections

The number of graduates in these various disciplines has not been very high and has remained more or less constant throughout the 1980s. If the current trend continues over the coming decade, an average of 90 students a year will graduate in these fields from Quebec institutions.

Occupation after graduation

A greater than average number of these graduates do not enter the labour market immediately after graduation. This is probably attributable to a higher unemployment rate. Among those who had found employment two years after obtaining their degrees, the link between education and work was very strong.

Occupational profile

Two occupational groups were strongly represented among employed graduates. They were forestry engineers and biology technicians, each group accounting for 35% of jobs.

Salary

The average annual salary of employed respondents to the 1988 survey was $26,500, comparable to the average for graduates with bachelor's degrees taken as a whole.

General picture

During the second half of the 1980s, these graduates faced a labour market offering job opportunities comparable to the average for graduates with bachelor's degrees. A slightly lower than average proportion would take the same program if they could start over.

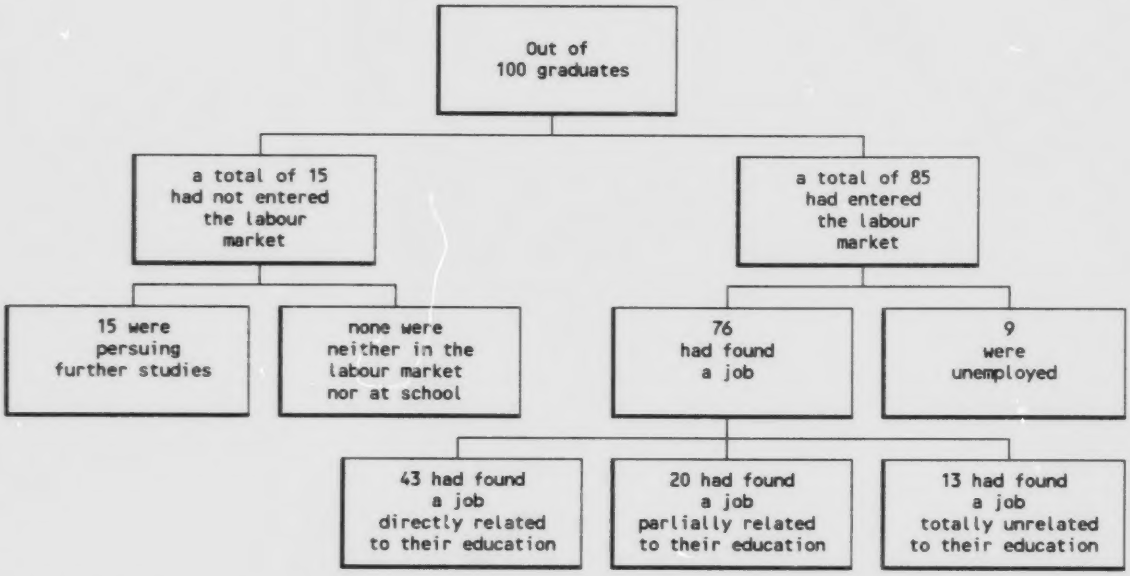
Over the coming decade, job opportunities are not expected to vary greatly. The market should offer the same prospects on average as for graduates with bachelor's degrees in other disciplines.

TRANSPORT TECHNOLOGIES

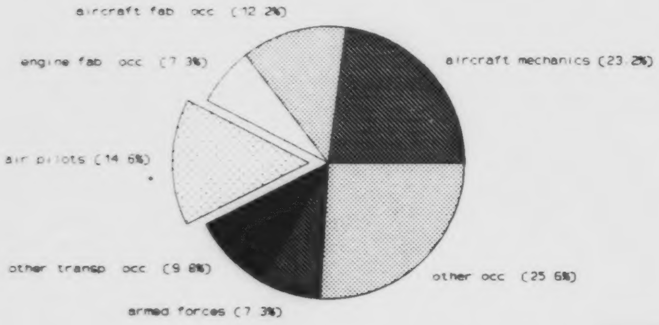
APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 15 had not entered the labour market
a total of 85 had entered the labour market
15 were persuing further studies
none were neither in the labour market nor at school
76 had found a job
9 were unemployed
43 had found a job directly related to their education
20 had found a job parlially related to their education
13 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	0.4	---
1985/90	75	0.5	1.0
1990/95	65	0.5	0.9
1995/2000	70	0.5	0.8

APPLIED SCIENCES

TRANSPORT TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses the specialized technologies of navigation, piloting and aircraft maintenance. It does not include technologies related to the manufacturing of transport equipment, which are classified with mechanical and industrial process engineering.

Trends and projections

The various institutions train only a very small number of these graduates each year. However, the number of graduates has increased slightly more rapidly than the entire vocational college sector over the second half of the last decade. If recent trends continue, an average of 70 graduates per year is expected during the 1990s.

Occupation after graduation

A proportion of graduates comparable to the average were continuing their studies one year after graduation. Of those who entered the labour market, the placement rate was 90%, which is high but nonetheless comparable to the average. The relation between education and work was perceived by the employed graduates as being more direct than the average. About 95% of the jobs obtained were full time and 80% of them were permanent.

Occupational profile

While deck officers were under-represented in relation to the number of navigation graduates, pilots accounted for a significant proportion of the jobs obtained (14%). The transport support personnel group provided far more numerous entry-level jobs. However, the groups of aircraft and motor mechanics and assemblers provided the most market entry opportunities, with 24%, 13% and 7% respectively of the jobs held by graduates one year after completing their studies. Specializing primarily in maintenance, most of these graduates were hired by companies in the transport sector (45% of jobs). Transport equipment manufacturing companies equipment recruited 25% of these graduates and government institutions, 10%.

Salary

The average annual salary of $22,900 for graduates who were working full time placed them at the top among the various college disciplines.

General picture

The transport sector, which suffered considerably during the 1981-82 recession, recovered quickly during the second half of the last decade. The recovery gave rise to a significant increase in the demand for labour, which favoured these graduates. The deregulation of the sector, the globalization of markets and the rationalization of the activities they create as well as the economic elements causing fuel prices to rise are all factors that will probably make it unlikely to sustain the growth of the past few years.

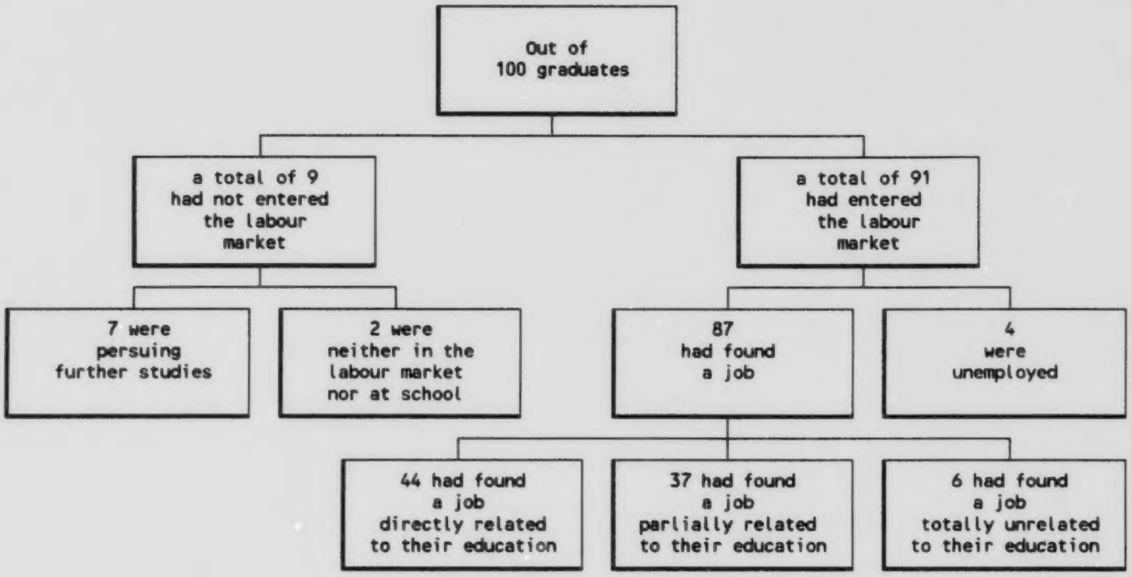
Thus, aircraft maintenance workers will see a tightening of the market. These workers can nonetheless count on the vigourous manufacturing sector which includes in its ranks world leaders such as Bombardier and Pratt & Whitney to maintain above average employment opportunities. In other respects, shortages of pilots (aircraft and helicopters) are also expected during the next decade due to the aging of the current labour force.

OTHER ENGINEERING TECHNOLOGIES

APPLIED SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates

a total of 9 had not entered the labour market

a total of 91 had entered the labour market

7 were persuing further studies

2 were neither in the labour market nor at school

87 had found a job

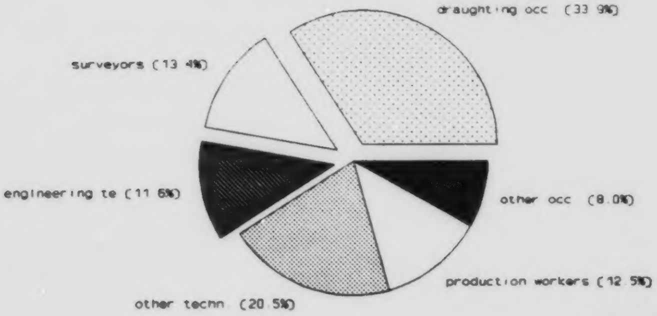
4 were unemployed

44 had found a job directly related to their education

37 had found a job parlially related to their education

6 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	215	1.4	0.1
1985/90	185	1.3	1.0
1990/95	155	1.2	0.8
1995/2000	160	1.2	0.8

APPLIED SCIENCES

OTHER ENGINEERING TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of studies encompasses the disciplines of mechanical drafting, cartographic and geodesic technologies, maintenance analysis, physical and purification technologies and industrial safety.

Trends and projections

The growth in the number of graduates has been comparable to that of the vocational college sector taken as a whole during the 1980s. If this trend continues, the number will reach an average of 150 to 160 over the next decade due to the expected decline in the school population at the college level.

Occupation after graduation

Graduates in this discipline had a better than average success on the labour market since, according to the Relance Survey, more than 90% of them entered the market right after graduation. The 96% placement rate for these graduates was one of the highest at the college level. According to these graduates, more than 80% of the jobs were related to their education.

Occupational profile

Because this is a diversified field of study, the jobs held by graduates in this field are also very diversified. Graduates entering this training must nonetheless expect to find work as technicians in the area of technical drawing (34%), surveying (13%) and engineering (11%) or in other physical or biological sciences (14%). Other occupations open to these graduates are related to manufacturing, those of machinists, installers and repairers of electronic equipment. As in other engineering technologies, a small proportion of these graduates were working in categories of jobs requiring little specialization.

Salary

The average salary of graduates in these disciplines was slightly higher than average at $18,000 one year after graduation.

General picture

As indicated by the high rate of employment in jobs directly related to education, the market outlook for these graduates was excellent over the past few years, particularly in the second half of the decade when requirement growth was very vigourous.

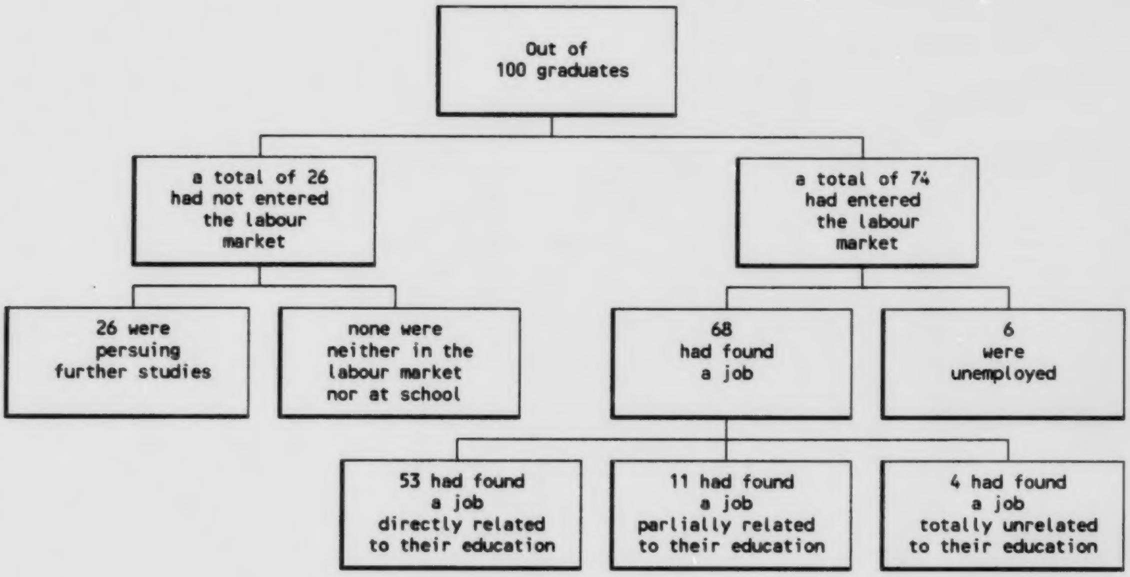
Forecasts point to a substantial drop in demand over the next few years, especially in relation to the designer groups. By minimizing the need for corrections and adjustments, computer-aided design software will continue to significantly reduce openings for draughtsmen/women. However, the demand will remain steady for more qualified concept designers. In all cases, knowledge of design software will be a job requirement for these professionals.

OTHER ENGINEERING DISCIPLINES

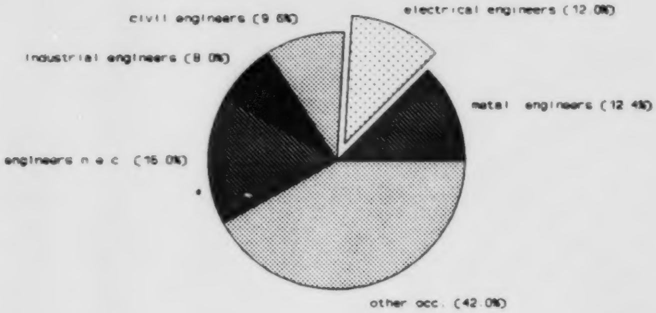
BACHELOR'S DEGREE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 26 had not entered the labour market
a total of 74 had entered the labour market
26 were persuing further studies
none were neither in the labour market nor at school
68 had found a job
6 were unemployed
53 had found a job directly related to their education
11 had found a job parlially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	450	2.0	0.4
1985/90	515	2.1	1.0
1990/95	525	2.1	0.8
1995/2000	550	2.1	0.8

This field of study encompasses other engineering specialties such as aerospace, mining, industrial, metallurgical, biomedical, environmental, computer and rural engineering. Not all these programs are offered at all universities. Generally, advanced courses in mathematics, physics, chemistry and biology are prerequisites, but there may be other entrance requirements.

Trends and projections

In engineering disciplines taken as a whole, the number of graduates in "other" specialities grew slightly less quickly during the 1980s. Over the coming years, their proportion is expected to stabilize at approximately 20%, representing an average rise of 5% in the number of graduates during the 1990s.

Occupation after graduation

A higher than average percentage of these graduates were still going to school two years after obtaining their bachelor's degrees. The unemployment rate of those who had entered the labour market was lower than for graduates in other engineering specialties. Among those who had found a job, the link between work and education was closer--as it was for the other engineering disciplines--than among graduates with bachelor's degrees taken as a whole.

Occupational profile

More than 50% of graduates employed two years after graduation worked as engineers. Of these, the groups of engineer/metallurgist and engineer/electrician were the most frequently observed occupational groups. Groups in the management category also provided a significant number of openings in the short and medium term.

Salary

The average salary of survey respondents working full time two years after graduation was $31,100 annually. As in the case of engineering disciplines in general, this was appreciably above the average for graduates with bachelor's degrees.

General picture

Labour market entry opportunities over the past five years have been better than average, when compared with those open to graduates with bachelor's degrees as a whole. An average proportion said they would make the same academic choice if they had to start their education all over again.

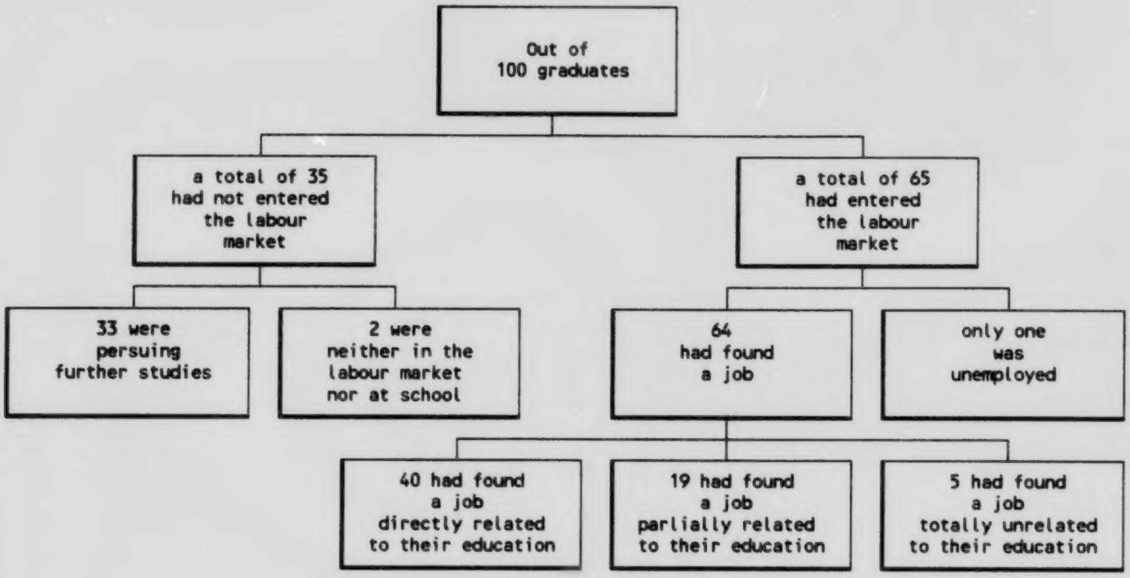
Over the coming years, labour market prospects for these graduates are expected to wane somewhat. Some specialties, however, should experience more dynamic growth. These include specialities in aeronautics, environment and computer systems, sectors with a high growth rate.

OTHER ENGINEERING DISCIPLINES

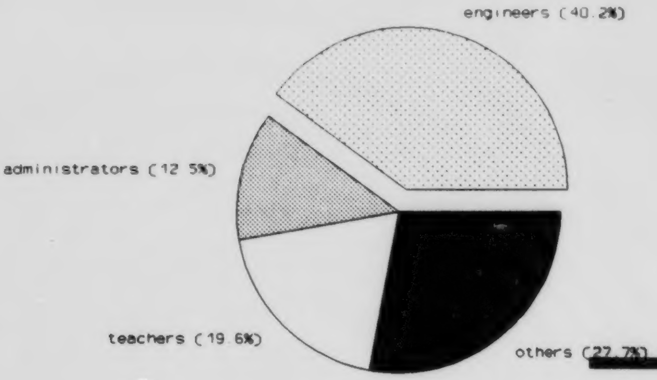
MASTER'S DEGREE AND DOCTORATE

APPLIED SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
33 were persuing further studies
2 were neither in the labour market nor at school
64 had found a job
only one was unemployed
40 had found a job directly related to their education
19 had found a job parlially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	200	4.8	0.5
1985/90	270	5.4	1.0
1990/95	245	5.2	0.8
1995/2000	225	5.2	1.0

APPLIED SCIENCES

OTHER ENGINEERING DISCIPLINES

MASTER'S DEGREE AND DOCTORATE

This grouping of graduate level engineering disciplines includes chemical, energy, industrial, mechanical, metallurgic, mineral, physical and rural engineering.

Trends and projections

Generally, the number of graduates in these disciplines rose from an average of 200 in the first half of the decade to an average of 270 in the second half. This rate of growth was slightly higher than that of all disciplines at the graduate level considered together. The number of graduates is expected to drop somewhat in the coming years, because of the demographic decline in the corresponding age categories, a decline that will probably not be compensated for completely by the increase in school attendance.

Graduates' labour market participation

A high percentage of these graduates were pursuing further studies two years after graduation. The unemployment rate of those who had entered the labour market was very much below average, and the education-work link was above average. According to the survey results, 60% of jobs found were directly related to studies.

Occupational profile

The occupational profile of graduates two years after finishing their studies was varied. Positions as engineers accounted for 45% of jobs, but these were spread out across all engineering specialties. The groups providing the greatest number of jobs were industrial engineers and civil engineers. The next largest group was that of teachers, in particular research and teaching assistants, who alone accounted for 10% of jobs. This high percentage is in part attributable to the fact that a great number of graduates decided to pursue further studies. Professionals in the natural and physical sciences and managers also accounted for a significant number of jobs.

Salary

The average annual salary of respondents to the 1988 survey working full time was $35,200.

General picture

In contrast to graduates in other disciplines, graduates with advanced degrees in these disciplines did not seem to have better labour market entry possibilities than graduates with bachelor's degrees. Accessibility is comparable with that of graduates with advanced degrees as a whole.

During the second half of the 1980s, the market for these graduates recovered from the 1981-82 recession. After a period of rapid growth, demand for these occupations should drop slightly, although it should remain at a level that will provide job opportunities.

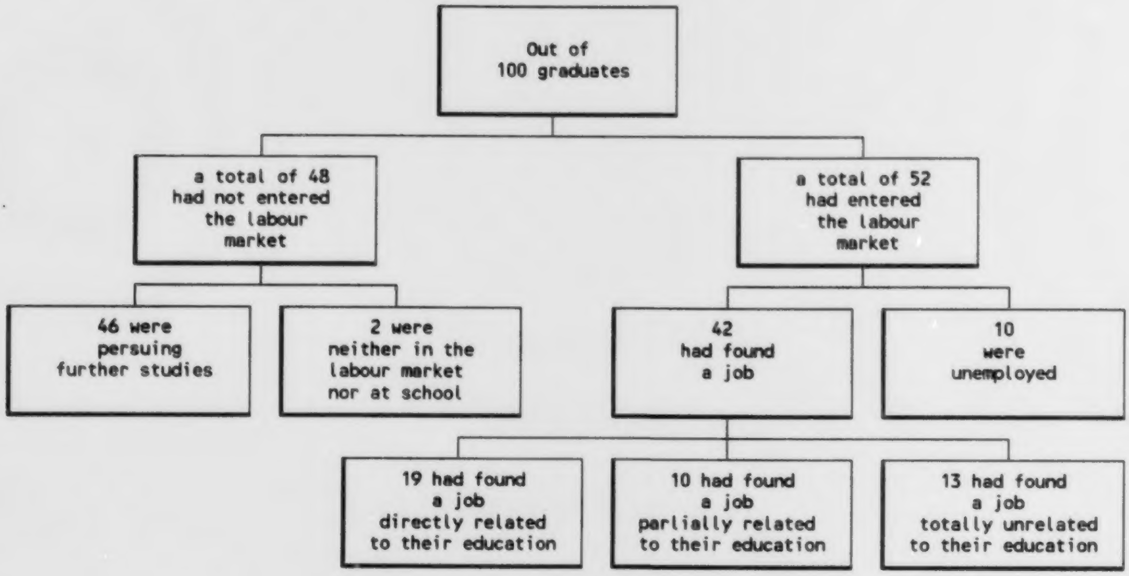
BIOLOGICAL SCIENCES

BIOLOGY

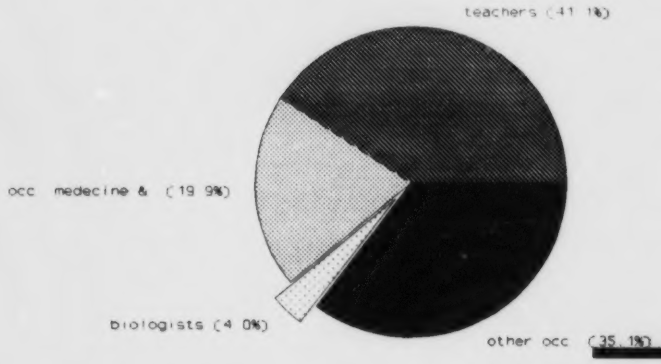
BACHELOR'S DEGREE

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 48
had not entered
the labour
market
a total of 52
had entered
the labour
market
46 were
persuing
further studies
2 were
neither in the
labour market
nor at school
42
had found
a job
10
were
unemployed
19 had found
a job
directly related
to their education
10 had found
a job
parlially related
to their education
13 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	555	2.5	---
1985/90	735	3.0	---
1990/95	775	3.0	---
1995/2000	775	3.0	---

BIOLOGICAL SCIENCES

BIOLOGY
BACHELOR'S DEGREE

This field of study encompasses specialties such as genetics and microbiology but does not include, among others, botany, zoology, biophysics and medicine which are listed elsewhere. The biology program is offered in most Quebec universities. Prerequisites for admission vary according to the university but generally include courses in physics, chemistry, biology and mathematics in addition to a Diploma of Collegial Studies.

Trends and projections

After experiencing a decline in the first half of the last decade, the popularity of this discipline among young people recovered slightly starting in 1985. From more than 4% in 1977 the proportion of graduates in this sector compared to graduates with bachelor's degrees taken as a whole rose from 2.4% in 1985 to nearly 3% in 1989. It is expected that during the 1990s about 750 students annually could be trained in Quebec universities if the trends of the past few years continue.

Occupation after graduation

According to the data for 1988, only 26% of the 1986 graduates in this field of study were employed, representing a markedly smaller proportion than the average for disciplines at the bachelor's level. The lower placement rate of graduates who decided not to continue their studies as well as the small number of those who found jobs directly related to their education tend to reflect a difficult labour market. This situation largely explains the fact that a very high number of graduates decided to pursue master's level studies or studies that were complementary to their initial training.

Occupational profile

About 40% of the graduates who were active on the labour market two years after completing their studies were working in the teaching sector. In particular, secondary school teachers (30%) and university research assistants (10%) represented the most common positions held. With respect to health-related jobs, which constituted the other large occupational group, the most common were various occupations in medical technology (10%), dietetics (5%) and nursing (5%). Finally, less than 5% of these graduates were working as biologists.

Salary

The difficult labour market situation for these graduates is also reflected in the salary outlook upon graduation. The average salary of respondents to the National Graduate Survey of graduates working full time in 1988 was $21,500 annually compared to $26,600 for respondents with bachelor's degrees taken as a whole.

General picture

The overall labour market situation for these graduates appeared to be more difficult than that for the average of graduates with a bachelor's degree. Their placement rate was lower and job opportunities directly related to their education were fewer. This situation was reflected in the average salary which was 20% lower than the average. Finally, a smaller than average proportion indicated that they would choose the same field of studies.

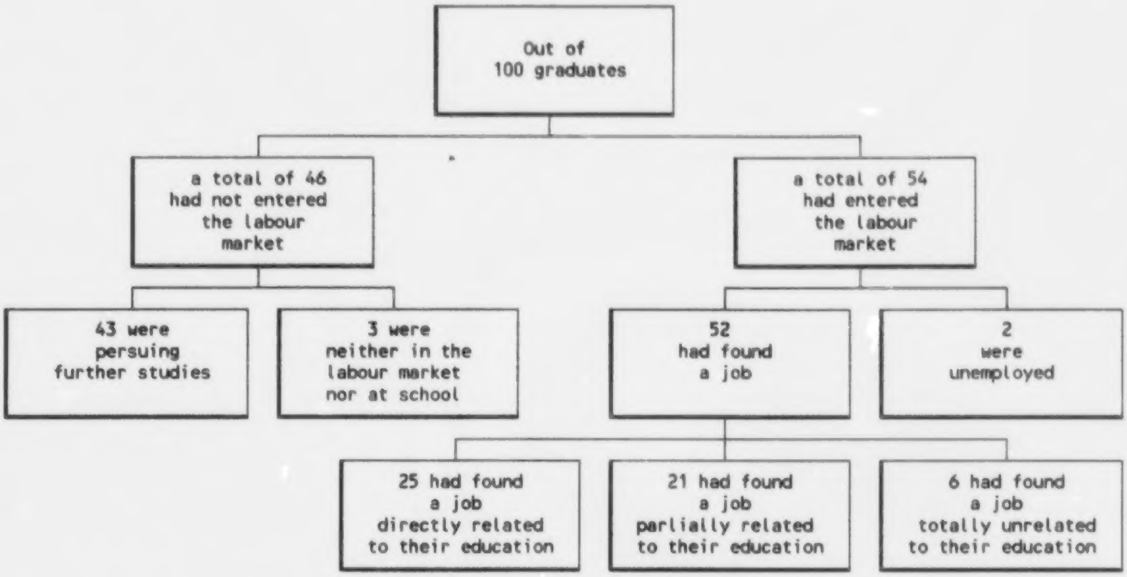
In the years to come, the employment outlook for the main occupations associated with this field of study will likely continue to be difficult. On the one hand, the decrease in the secondary school population could lead to cutbacks in teaching staff at this level. On the other hand, despite dynamic growth, the biologist group will not be able to absorb the forecast number of graduates if the trends of the past few years continue.

BIOLOGY

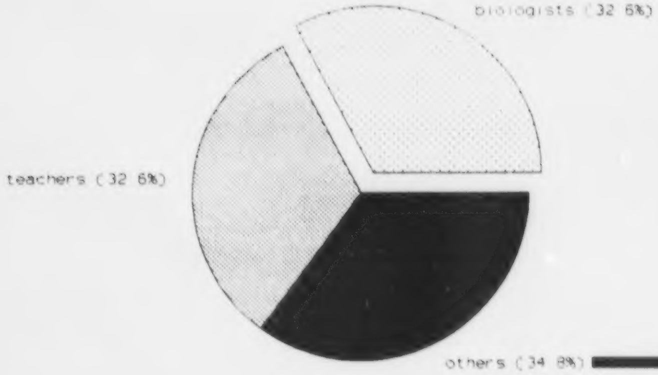
MASTER'S DEGREE AND DOCTORATE

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of
100 graduates
a total of 46
had not entered
the labour
market
a total of 54
had entered
the labour
market
43 were
persuing
further studies
3 were
neither in the
labour market
nor at school
52
had found
a job
2
were
unemployed
25 had found
a job
directly related
to their education
21 had found
a job
parlially related
to their education
6 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	2.0	0.1
1985/90	105	2.1	1.0
1990/95	100	2.1	0.9
1995/2000	90	2.1	1.0

BIOLOGY
MASTER'S DEGREE AND DOCTORATE

Graduate programs in biology are offered by most Quebec universities. Specialized programs in cell biology, dental biology, molecular biology, microbiology and immunology are available in some universities.

Trends and projections

Rising from 80 to 110 during the 1980s, the number of graduates in this discipline grew at an average rate. In view of the anticipated drop in the number of graduate students as a whole during the coming decade, the number of degrees could drop by about 15% as the year 2000 approaches.

Graduates' labour market participation

Among those who had entered the labour market, placement was above average and the unemployment rate was barely 4% at the time of the survey. The percentage of people who said their jobs had a link with their education was slightly below average but nevertheless quite high. Like graduates with bachelor's degrees, a markedly above average proportion of these graduates were pursuing further studies two years after obtaining their degrees.

Occupational profile

Jobs as biologists were far more accessible to graduates with master's degrees or doctorates than to applicants with bachelor's degrees. While barely 5% of people with bachelor's degrees had found such a job, nearly 35% of people with graduate degrees had found one. Generally, 45% of these graduates held jobs in the natural sciences and engineering and 30% in teaching, of which two thirds were as research assistants. This reveals the importance of the university research sector in providing job opportunities for these graduates.

Salary

The average annual salary of survey respondents working full time was $28,400, lower that the average salary of $38,000 reported by respondents in all disciplines as a whole.

General picture

The apparent contradiction between the high placement rate of graduates who had entered the labour market and the strong general tendency to pursue further studies can be explained in large part by the fact that university research is an important means of entry to the labour market and can be easily combined with continuing one's education.

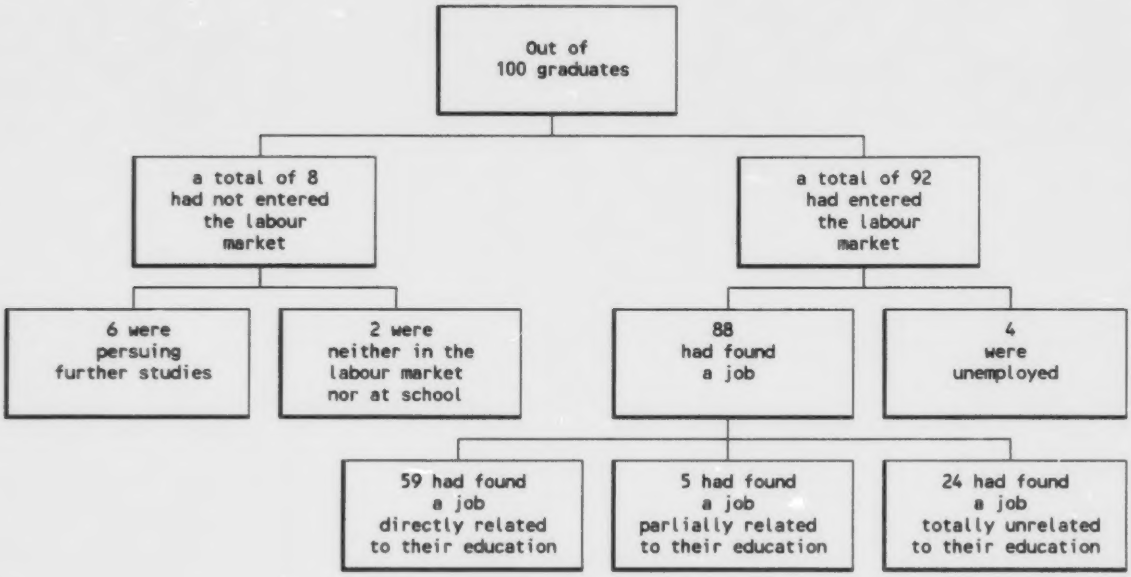
Outside the university, job opportunities seem to be more limited, since the sector providing the most employment is the public service, and it is facing tight budgetary constraint.

MEAT CUTTING

SECONDARY VOCATIONAL

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 8
had not entered
the labour
market
a total of 92
had entered
the labour
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6 were
persuing
further studies
2 were
neither in the
labour market
nor at school
88
had found
a job
4
were
unemployed
59 had found
a job
directly related
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to their education
24 had found
a job
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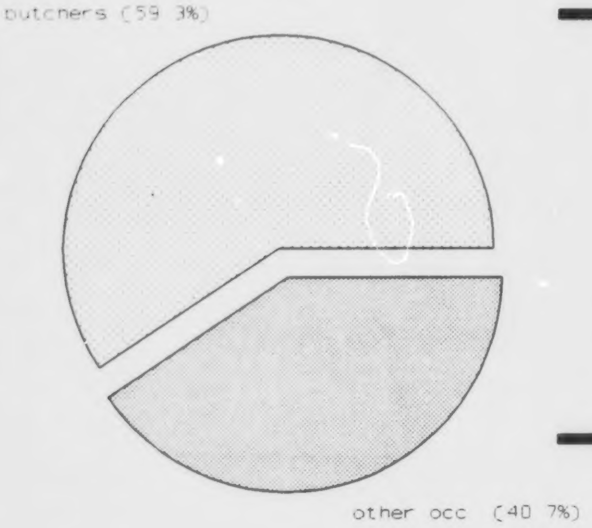
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	125	0.4	---
1985/90	70	0.6	1.0
1990/95	45	0.5	1.3
1995/2000	45	0.5	1.2

BIOLOGICAL SCIENCES

MEAT CUTTING
SECONDARY VOCATIONAL

This field of training is intended to help students acquire meat cutting skills.

Trends and projections

Although this field of study recorded a slight decline in enrolment, it has weathered the drop in the popularity of secondary vocational education better than other disciplines.

Occupation after graduation

A large majority of the graduates who decided to enter the labour market were employed at the time of the Relance Survey. This success encouraged many graduates to enter the labour market and may explain why very few of them decided to continue their studies. Among the employed graduates, about seven out of ten held jobs that were for the most part very closely related to their education. More than 90% of jobs were full time and only 15% were temporary.

Occupational profile

In six out of ten cases, these graduates held jobs as butchers or assistant butchers. They found jobs primarily with companies in the food retail trade and, to a lesser extent, with meat-processing companies.

Salary

The average salary of those working full time was $14,600 one year after graduation.

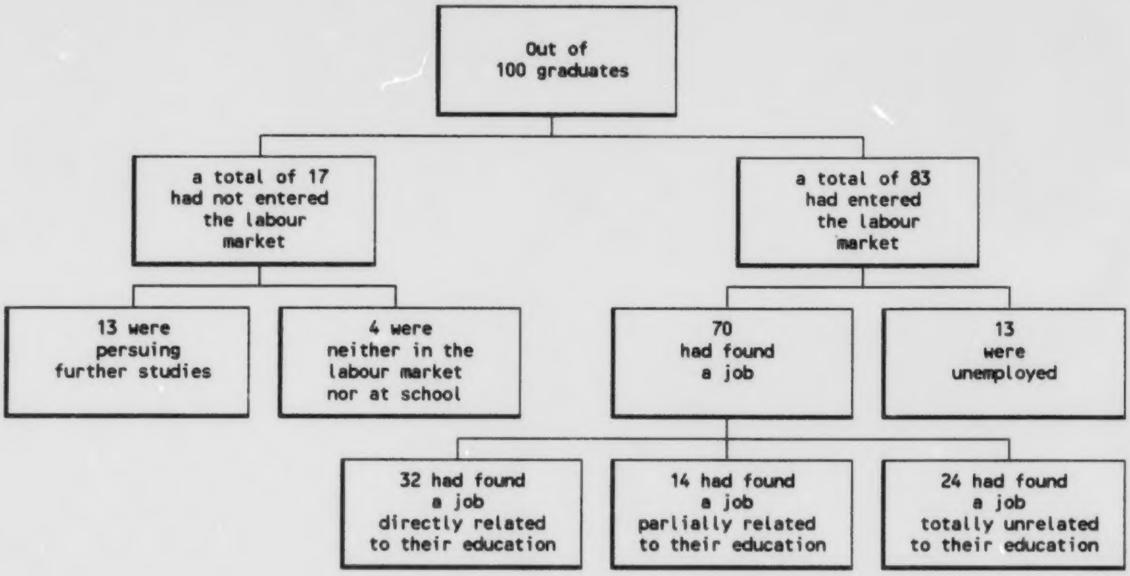
General picture

Employment opportunities for these graduates will continue to benefit from the proliferation of small stores and specialty meat counters in the larger stores. Pre-packaging greatly affects the skills required in this field, placing the emphasis on sales and customer relations skills.

PROFESSIONAL COOKING
SECONDARY VOCATIONAL

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
13 were persuing further studies
4 were neither in the labour market nor at school
70 had found a job
13 were unemployed
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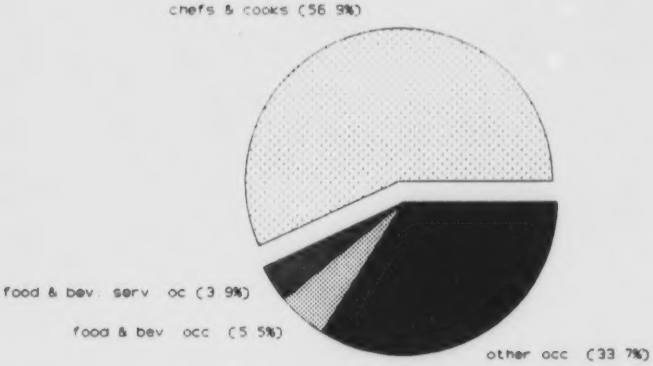
24 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	785	2.7	0.3
1985/90	285	2.5	1.0
1990/95	170	1.8	1.9
1995/2000	175	1.8	1.9

PROFESSIONAL COOKING
SECONDARY VOCATIONAL

This field of study trains students in the preparation of light full-course meals as well as the creation and implementation of various menus.

Trends and projections

From slightly less than 800 graduates in the early 1980s, this field of study has produced less than 300 in each of the past five years. Although the number of graduates dropped by more than half, the decline is still within the average recorded for all the secondary vocational programs over this period so that graduates in the cooking program continue to account for a large share of 2.5% of all the graduates at this level.

Occupation after graduation

The 1987 graduates faced a relatively more favourable labour market than the other secondary vocational graduates taken as a whole. Seven out of ten graduates succeeded in finding a job which, in two cases out of three, was directly or partially related to their training. Moreover, 85% of the jobs were full-time and more than 90% were permanent. The proportion of unemployed graduates was a little more than 16%.

Occupational profile

An exceptionally high proportion of the jobs were concentrated in the occupational group of chefs and cooks. From the industrial standpoint, more than 60% of those employed were working within the accommodation-lodging sector and a smaller proportion (14%) were working in the retail trade.

Salary

At an average of $10,800, the salaries earned by these graduates in 1988 were very low.

General picture

The placement opportunities in related occupations compare positively to those in other disciplines at the secondary level. Among the factors that help to explain this good performance should be mentioned the rapid expansion of the restaurant industry, especially family-type restaurants, and the high turnover rate which makes it easier for these graduates to enter the labour market.

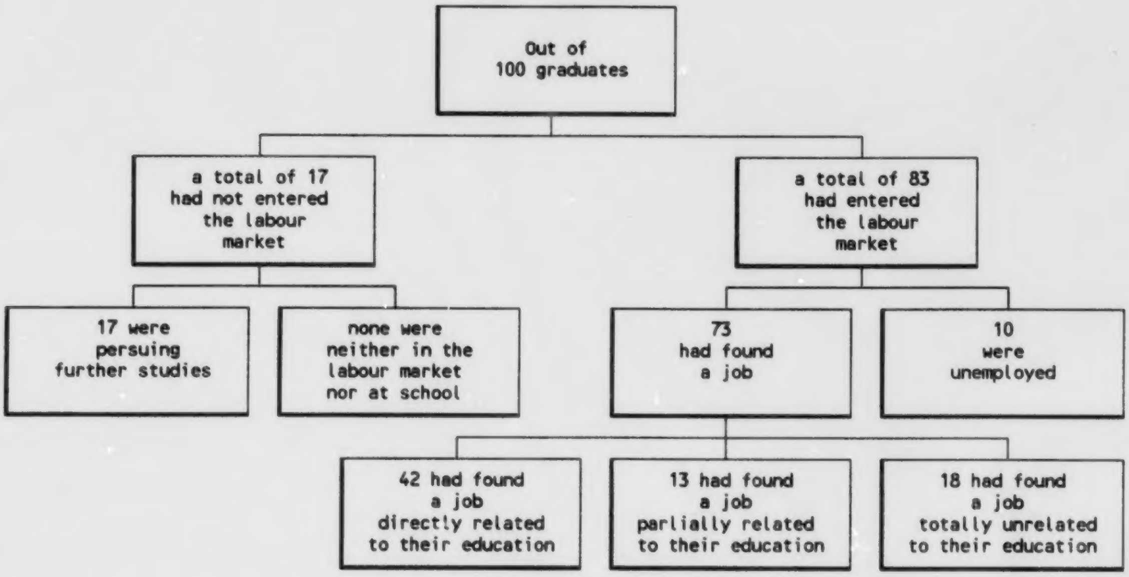
The factors which have maintained the growth of the restaurant sector over the past decade, i.e. higher salaries, two-income families and changes in eating habits should continue to have a positive effect on the industry in the coming years. In this respect, the employment outlook should remain one of the brightest throughout the 1990s.

PASTRY

SECONDARY VOCATIONAL

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation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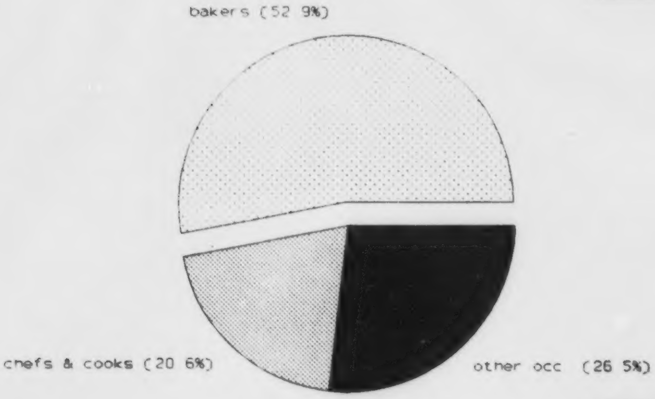
a total of 17
had not entered
the labour
market
a total of 83
had entered
the labour
market
17 were
persuing
further studies
none were
neither in the
labour market
nor at school
73
had found
a job
10
were
unemployed
42 had found
a job
directly related
to their education
13 had found
a job
parlially related
to their education
18 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	90	0.3	0.4
1985/90	50	0.5	1.0
1990/95	35	0.4	1.7
1995/2000	35	0.4	1.7

PASTRY
SECONDARY VOCATIONAL

This field of training covers the preparation of pastry products, fillings and creams, confectionery and bread as well as the daily management of related activities.

Trends and projections

Unlike the severe drop in the overall enrolment in the secondary vocational sector, enrolment in this field of study remained somewhat more steady over the 1980s.

Occupation after graduation

An above-average proportion of graduates decided to continue their studies. The placement rate for graduates who entered the labour market was 90% one year after graduation, representing an above-average level. Those who had found jobs were generally working full time in jobs that were more regularly related to education than their colleagues in other disciplines.

Occupational profile

The occupational groups of bakers and cooks dominated the occupational profile of these graduates, with 50% and 20% of the jobs obtained. The main sectors providing employment were the accommodation-restaurant, retail trade (small bakeries and pastry shops) and food sectors, with 45%, 30% and 10% of the jobs respectively.

General picture

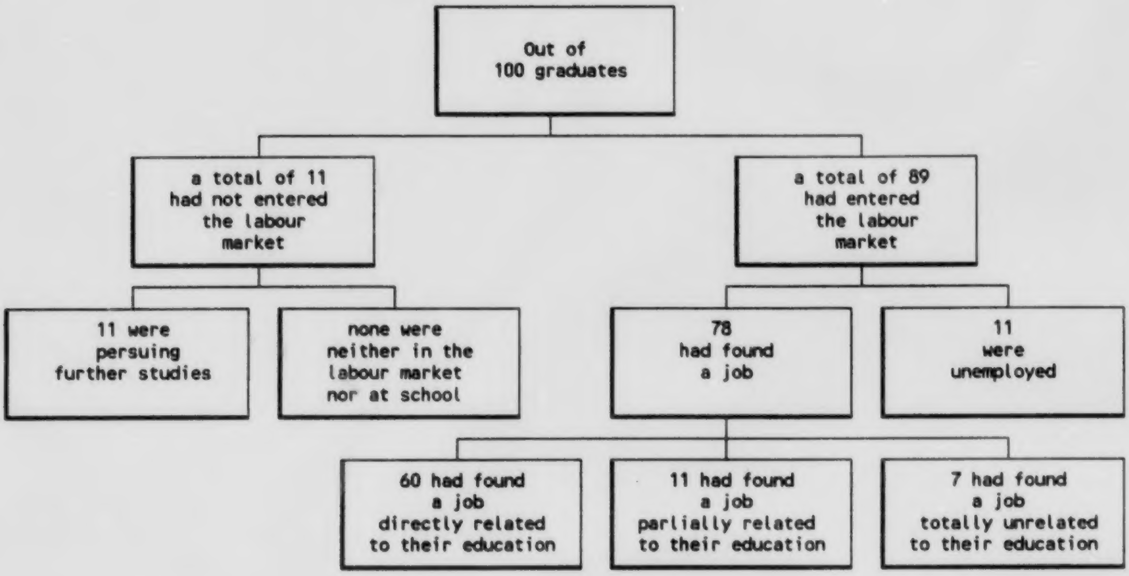
The employment outlook for these graduates appears to be slightly brighter than that for graduates in other disciplines at the secondary level. Given the anticipated growth in the labour demand in related occupations, job opportunities over the next few years should remain as good.

HOUSEHOLD SCIENCE

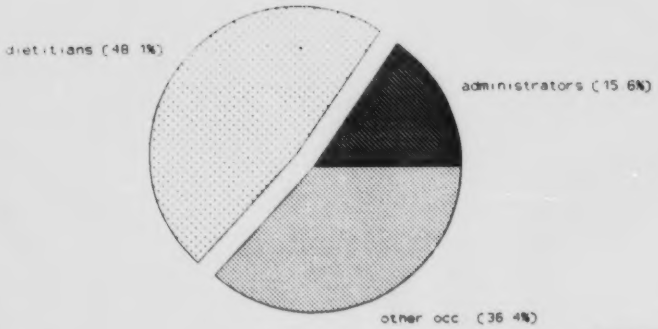
BACHELOR'S DEGREE

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 11
had not entered
the labour
market
a total of 89
had entered
the labour
market
11 were
persuing
further studies
none were
neither in the
labour market
nor at school
78
had found
a job
11
were
unemployed
60 had found
a job
directly related
to their education
11 had found
a job
parlially related
to their education
7 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	105	0.5	1.9
1985/90	155	0.6	1.0
1990/95	150	0.6	0.7
1995/2000	175	0.7	0.8

BIOLOGICAL SCIENCES

HOUSEHOLD SCIENCE
BACHELOR'S DEGREE

This group of fields of study includes food, consumption, family, dietetic and other household sciences, except interior decoration. Laval and Montréal offer bachelor's programs in dietetics. McGill offers a major in dietetics and food sciences. Advanced college courses in differential and integral mathematics, physics, chemistry and biology are prerequisites.

Trends and projections

The number of graduates in this discipline grew at a rate comparable to the average for graduates with bachelor's degrees taken as a whole between 1980 and 1990. If this trend continues over the next few years, one can expect an average of some 170 graduates annually during the coming decade.

Occupation after graduation

According to the 1988 survey of graduates, the labour market participation rate of these graduates greatly exceeded the average for other graduates with bachelor's degrees. The placement rate in jobs related to education was also higher than average, although the unemployment rate was somewhat unfavourable. These different indicators, along with a higher incidence of part-time work, indicate that labour market entry for these graduates may depend on accepting work on a contract basis, and this means greater likelihood of periods of temporary unemployment.

Occupational profile

With nearly 50% of jobs, the group of dieticians is by far the one that offers the most direct labour market entry possibilities. Various other education-related jobs are open to these graduates, including production managers, food preparation supervisors and food controllers in the food and beverage sectors. Taken together, these categories account for nearly 25% of jobs held by these graduates two years after graduation.

Salary

Despite relatively favourable labour market entry conditions, salaries ($23,400 annually on average) reported by respondents to the 1988 survey who were working full time were 10% below the average for graduates with bachelor's degrees.

General picture

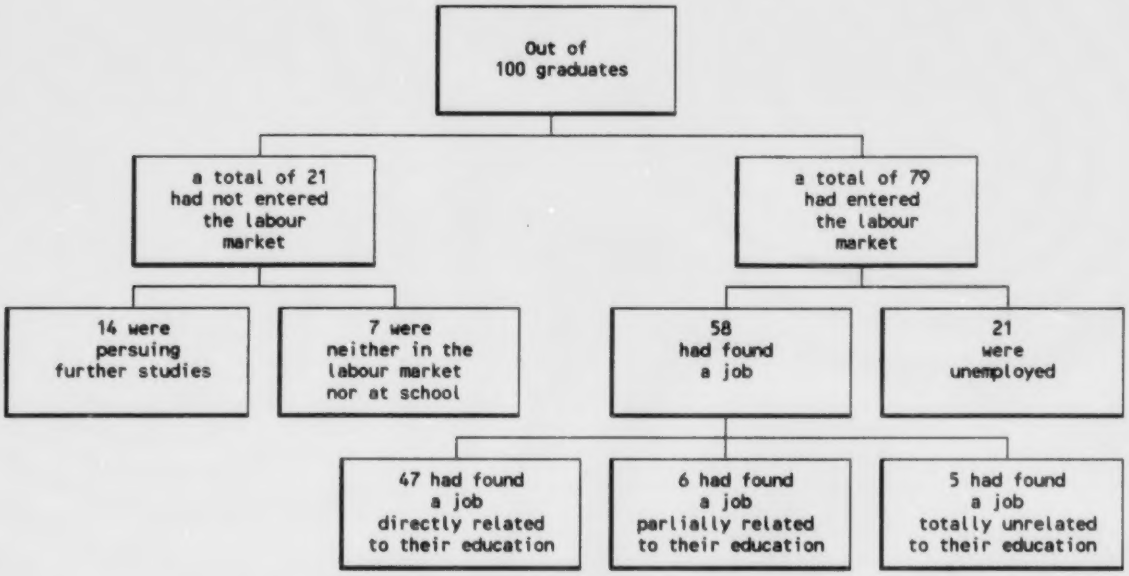
The labour market conditions described by the indicators presented above are generally better than average. However, trends in education-related occupations indicate that they are declining in relation to requirements in the previous period.

Over the coming years, this trend is likely to continue, as the growth rate of requirements for this kind of human resource continues to drop. Nevertheless, labour market entry possibilities are expected to remain in the range of the average for graduates with bachelor's degrees taken as a whole.

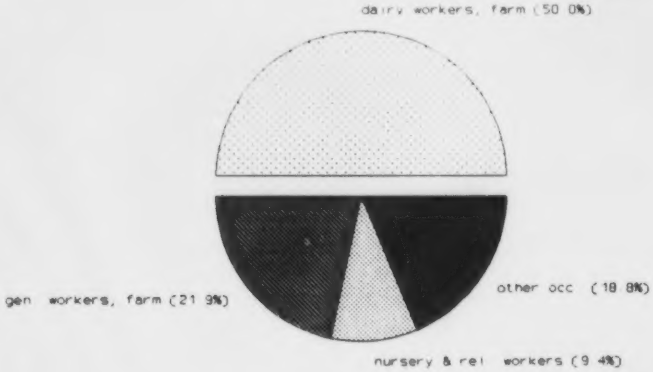
AGRICULTURE BIOLOGICAL SCIENCES

SECONDARY VOCATIONAL

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 21 had not entered the labour market
a total of 79 had entered the labour market
14 were persuing further studies
7 were neither in the labour market nor at school
58 had found a job
21 were unemployed
47 had found a job directly related to their education
6 had found a job partially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES **NUMBER OF GRADUATES**



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	335	1.1	0.3
1985/90	100	0.8	1.0
1990/95	40	0.4	3.0
1995/2000	40	0.4	2.1

AGRICULTURE
SECONDARY VOCATIONAL

This field of study includes various specialties related to horticulture and animal, vegetable, and dairy production.

Trends and projections

From an average of more than 300 graduates annually during the first half of the 1980s, the popularity of this field of study dropped dramatically to fewer than 100 graduates each year in the second half of the decade.

Occupation after graduation

Of the 57 graduates surveyed, only 33 were employed one year after graduation, representing an employment rate of 58%, which was lower than the 67% recorded for secondary vocational graduates taken as a whole. Nonetheless, most of the graduates held jobs directly related to their field of study (26) but a sizable proportion, nearly one-third, held temporary jobs.

Occupational profile

The occupation of dairy farm worker provides by far the most job opportunities since it accounts for nearly one-half of the employed graduates. The occupation of farm worker is second, providing jobs for five workers. Given the occupational distribution of these workers, it is not surprising that most of them work on a farm.

General picture

Despite a lower overall placement rate than the average for the secondary vocational sector, a larger proportion of graduates in this discipline held jobs related to their education. The employment outlook improved considerably during the second half of the 1980s owing to greater demand and the shrinking number of graduates. In fact, over the past few years increased demand for farm workers has tended to reflect the growth in the average size of farms.

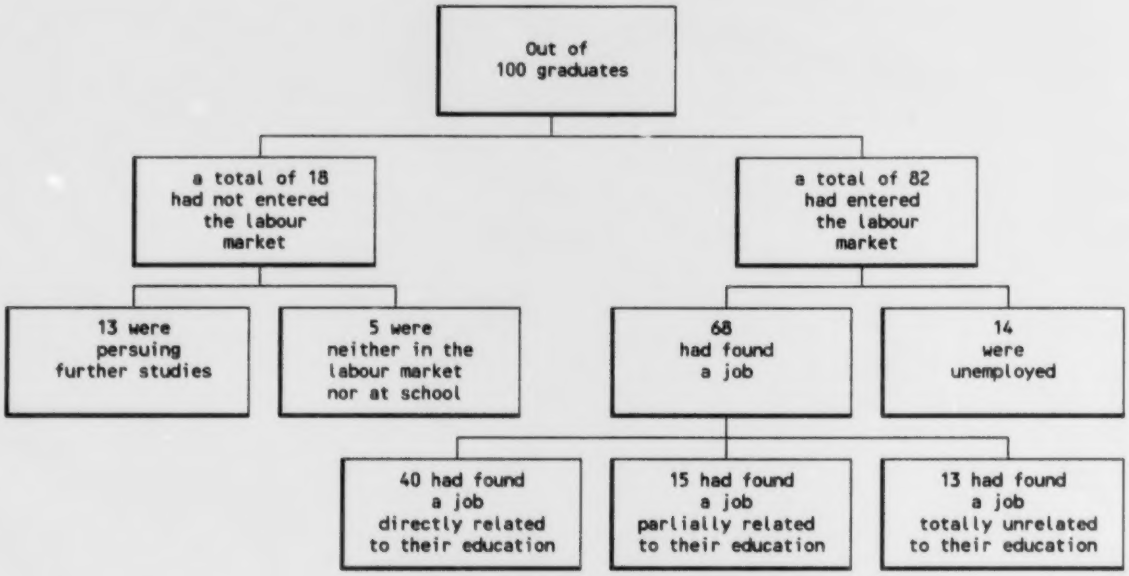
The requirement growth estimated for the 1990s indicates that the employment outlook will be quite similar to that of recent years. These graduates tend to face competition on the labour market from their older colleagues in agricultural technology and agricultural management technology at the college level who are also searching for a first job in the field.

AGRICULTURAL TECHNOLOGIES

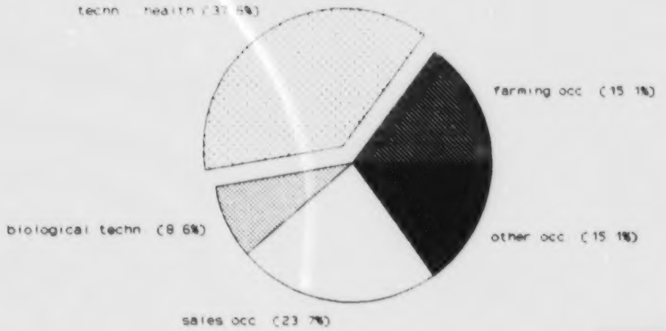
VOCATIONAL COLLEGE DIPLOMA

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 18 had not entered the labour market
a total of 82 had entered the labour market
13 were persuing further studies
5 were neither in the labour market nor at school
68 had found a job
14 were unemployed
40 had found a job directly related to their education
15 had found a job parlially related to their education
13 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	335	2.3	0.8
1985/90	295	2.1	1.0
1990/95	275	2.2	1.1
1995/2000	285	2.2	1.2

BIOLOGICAL SCIENCES

AGRICULTURAL TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This group of disciplines encompasses specialties in animal health, animal husbandry, horticulture, horse technology and soil technology. The disciplines related to horticulture are offered primarily at the Institut de technologie agro-alimentaire de St-Hyacinthe and those related to animal husbandry at the Institut de La Pocatière. Animal health specialties (veterinary medicine and animal health technologies) are available in a larger number of institutions in the Lower St. Lawrence, Estrie, Laval-Laurentides- Lanaudière, Mauricie-Bois-Francs and Montreal regions.

Trends and projections

Throughout the 1980s, these disciplines accounted for approximately 2% of the graduates in the college-level technologies taken as a whole. If this trend continues over the 1990s, between 275 and 285 students will graduate each year.

Occupation after graduation

A proportion of graduates similar to the average had entered the labour force after completing their studies. The placement rate for these graduates was 83%, a lower level the 90% average for the vocational college graduates taken as a whole. According to those who found employment, more than 80% of the jobs were related to their education. Part-time work accounted for 10% of the jobs obtained and temporary jobs for 20%.

Occupational profile

The groups of veterinary assistants and veterinary laboratory technicians which accounted for 25% and 7%, respectively, of the jobs dominated the occupational profile of these graduates. Occupations related to farm operation provided jobs for 13% of graduates. The jobs of biology technicians and salespersons in pet stores also provided openings for these graduates.

Salary

The average annual salary of respondents to the Relance Survey who were working full time was $16,100, a slightly lower level than the $17,700 earned on average by vocational college graduates.

General picture

Despite an overall lower than average placement rate, employment opportunities in related occupations were comparable to the average for the disciplines. Graduates specializing in animal care appeared to enjoy a more favourable labour market than graduates in agricultural technologies.

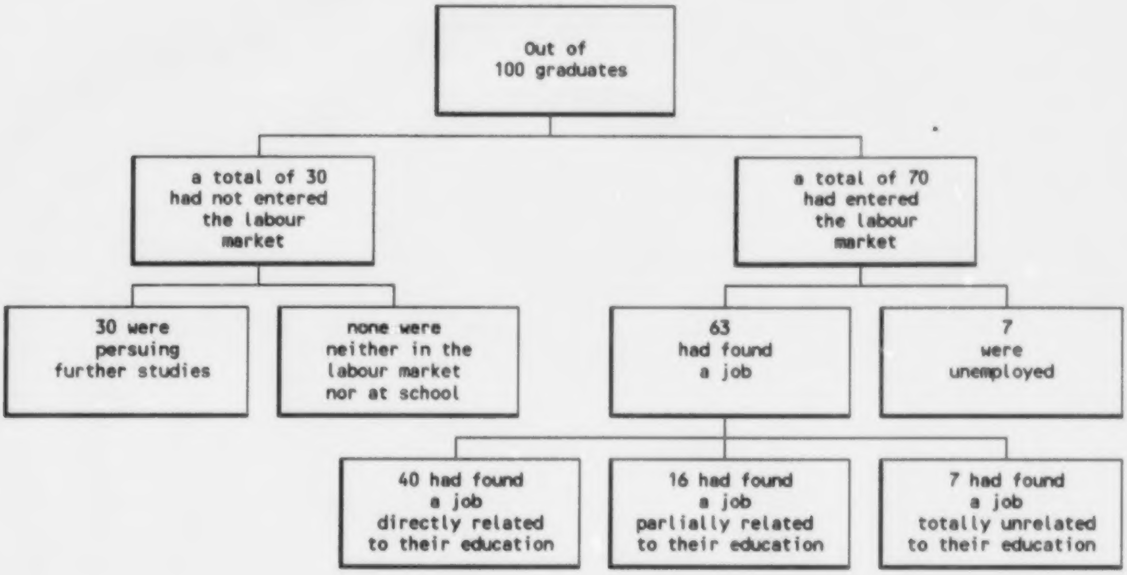
Due to the expected drop in the number of graduates and the continued growth of employment in related occupations, graduates in this discipline could benefit from improved job opportunities. Once again, graduates specializing in animal health will have an advantage.

ANIMAL SCIENCE AND PLANT SCIENCE

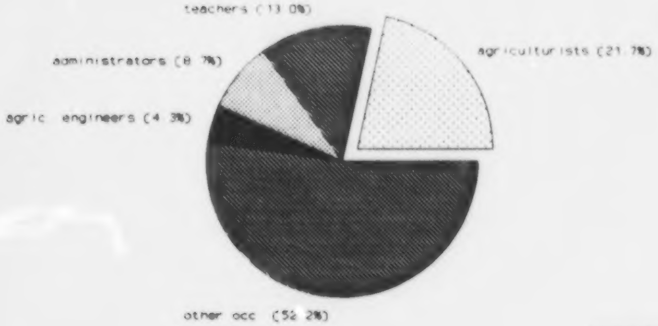
BACHELOR'S DEGREE

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 30 had not entered the labour market
a total of 70 had entered the labour market
30 were persuing further studies
none were neither in the labour market nor at school
63 had found a job
7 were unemployed
40 had found a job directly related to their education
16 had found a job parlially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	410	1.9	1.8
1985/90	550	2.2	1.0
1990/95	600	2.3	1.6
1995/2000	600	2.3	1.4

BIOLOGICAL SCIENCES

ANIMAL SCIENCE AND PLANT SCIENCE

BACHELOR'S DEGREE

This field of study comprises zoology, zootechnics, soil science, agriculture, botany, biochemistry, biophysics and other biological sciences. Given the diversity of these disciplines, the reader is referred to the university calendars for prerequisites and programs offered by the different universities.

Trends and projections

The number of graduates in these disciplines grew at a rate slightly higher than the average during the 1980s. If current trends continue throughout the 1990s, an average of nearly 600 students will graduate in one or another of these specialties each year.

Occupation after graduation

Two years after obtaining their degrees, 1986 graduates in this sector showed a labour market participation rate lower than the average for graduates in other disciplines. Proportionately, more of them had decided to pursue further studies. Among those who had decided to enter the labour market right away, unemployment was higher and jobs at least partially related to education were fewer.

Occupational profile

The occupational profile of graduates employed two years after graduation was dominated by the groups of occupations in the natural sciences (43%). Of these, agronomists accounted for the greatest number of jobs, with approximately 30% of positions.

Salary

The average annual salary of the 1988 survey respondents working full time was $20,000. This was well below the average for graduates with bachelor's degrees taken as a whole, which was $26,600 annually.

General picture

The situation of these graduates in the labour market seems to have deteriorated somewhat during the second half of the 1980s, as a result of slower growth in requirements. The low placement rates reported and lower than average salaries seem to confirm these difficulties. This probably explains in large measure why a higher proportion of these graduates decided to continue their studies and why only a small percentage considered their initial choice to be a good one.

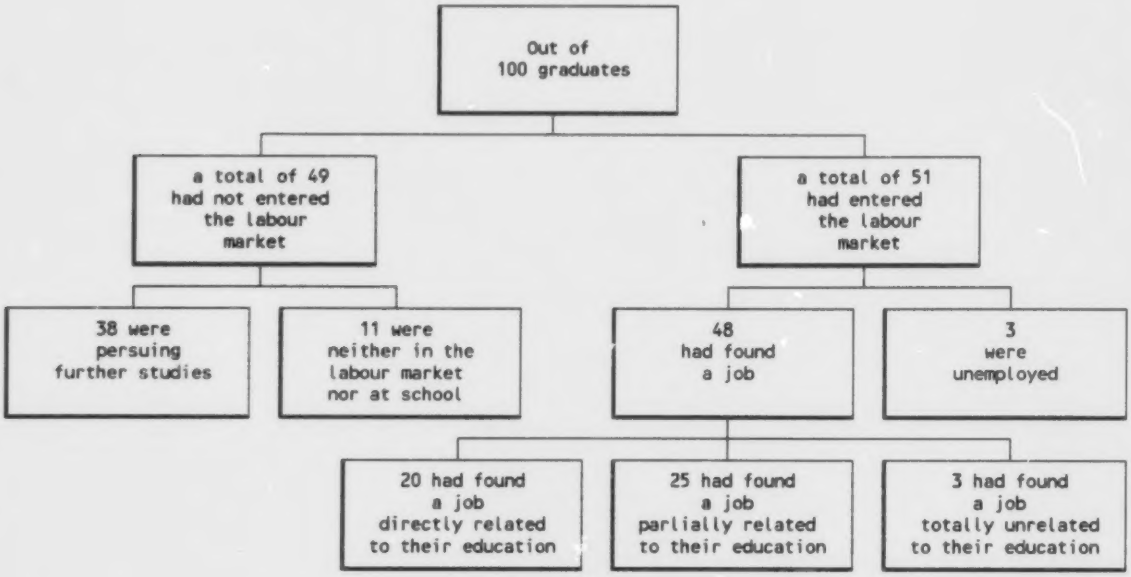
Employment opportunities in related occupations are expected to rise, and the labour market situation of these graduates should improve somewhat during the 1990s. All the same, they can expect to be confronted with a labour market more encumbered than the average.

ANIMAL SCIENCE AND PLANT SCIENCE

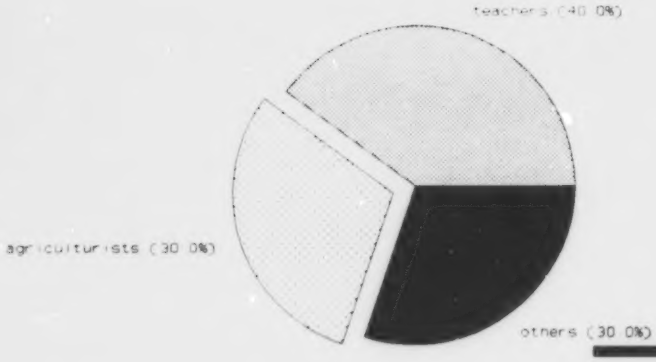
BIOLOGICAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 49 had not entered the labour market
a total of 51 had entered the labour market
38 were persuing further studies
11 were neither in the labour market nor at school
48 had found a job
3 were unemployed
20 had found a job directly related to their education
25 had found a job parlially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	65	1.5	3.7
1985/90	90	1.8	1.0
1990/95	85	1.8	1.2
1995/2000	80	1.8	1.2

BIOLOGICAL SCIENCES

ANIMAL SCIENCE AND PLANT SCIENCE
MASTER'S DEGREE AND DOCTORATE

Most of the programs in this field of study are offered at Laval University in food science and technology, soil science, agricultural microbiology, wood science and forestry. McGill University offers a program in plant sciences and one in renewable resources.

Trends and projections

The number of graduates in these disciplines grew more quickly than the average during the past decade, from 50 in 1980 to 90 in 1989. If this proportion remains the same, there should be an average of 90 graduates annually during the 1990s.

Graduates' labour market participation

According to Statistics Canada's survey of graduates, only 50% of 1986 graduates had entered the labour market after graduation. A high percentage had decided to pursue further studies. Of those who had entered the labour market, the placement rate was average for graduates with master's degrees or doctorates, and the jobs obtained were quite closely related to education.

Occupational profile

Nearly 40% of employed graduates held positions as agronomists or biologists, compared with 20% for graduates with bachelor's degrees. Approximately 40% held teaching positions, of which nearly a half were positions as research assistants at universities. Besides the educational sector, the public and parapublic sectors provided most job opportunities.

Salary

The average annual salary of survey respondents working full time was $30,800. This was 20% below the average.

General picture

The fact that both labour market participation rate and salaries were below average indicates that these graduates have a more difficult time than the average graduate entering the labour market. Accessibility to university research assistant jobs explains why a high percentage pursue further studies. At the same time, such jobs are an important means of entry into the labour market.

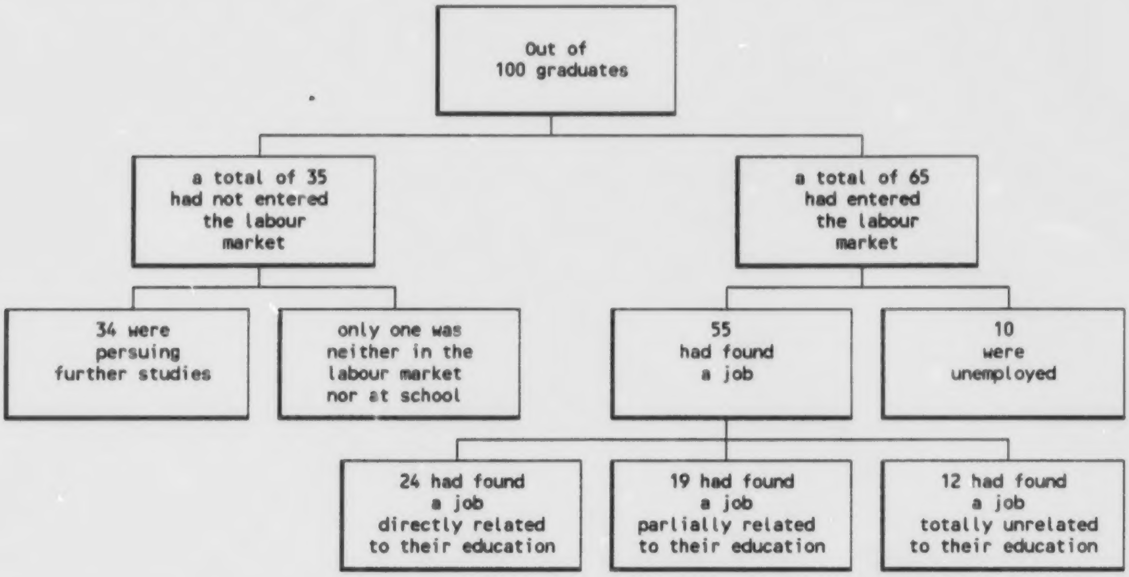
The 1980s saw a significant drop in the demand for the most directly related occupations. Although this trend should slow down in the coming years, graduates in these disciplines can expect to face a labour market offering fewer job opportunities than the average.

ENVIRONMENTAL AND CONSERVATION TECHNOLOGIES

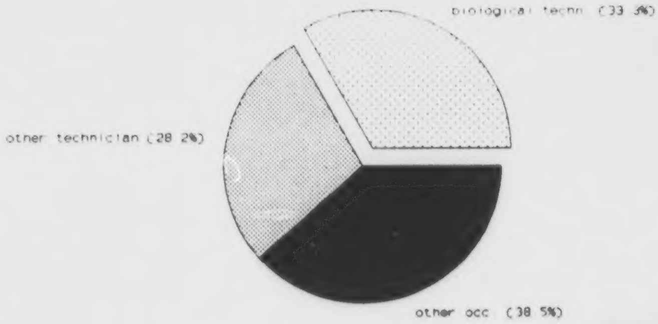
VOCATIONAL COLLEGE DIPLOMA

BIOLOGICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 35 had not entered the labour market
a total of 65 had entered the labour market
34 were persuing further studies
only one was neither in the labour market nor at school
55 had found a job
10 were unemployed
24 had found a job directly related to their education
19 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	165	1.1	0.7
1985/90	150	1.0	1.0
1990/95	120	1.0	1.8
1995/2000	125	1.0	1.6

BIOLOGICAL SCIENCES

ENVIRONMENTAL AND CONSERVATION TECHNOLOGIES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses training in wildlife management, land management, area studies and water purification.

Trends and projections

The number of graduates in these disciplines has increased at approximately the same rate as that of the college sector as a whole, maintaining its popularity at about 1% of all graduates. Given the rising interest in environmental problems, it is possible that disciplines related to purification will grow in popularity over the coming years.

Occupation after graduation

A very high proportion of these graduates choose to continue their studies at a higher level. About 34% of them did, in fact, decide to pursue this path compared to an average of 16% in the vocational sector. Placement for graduates who had entered the labour force immediately after graduation was slightly lower than the average, resulting in an unemployment rate of 12% one year after graduation. The link between eduction and work was quite comparable to the average but nearly half of the jobs were temporary.

Occupational profile

More than half the jobs held by these graduates one year after graduation were in the category of technicians, 35% of which were related to biological sciences. The occupation of medical laboratory technician also provided these graduates with interesting employment opportunities. Finally, occupations in the field of horticulture could also provide a means of entry into the market.

Salary

The average annual salary of $16,400 earned by graduates who were working full time was somewhat lower than the average for the vocational college sector as a whole.

General picture

Given the lower than average placement rate in related occupations, the high proportion of temporary jobs and the lower average salary, employment opportunities for these graduates appeared to be under stronger competition than in other disciplines. In this respect, it is not surprising to note that a large proportion of these graduates decided to continue their studies. Despite a certain amount of competition from graduates with bachelor's degrees for the jobs of biology technicians, college-level training nevertheless appeared to be more oriented towards the labour market since both the placement rate and the relation between education and work were higher. Like college graduates, a large number of university graduates with bachelor's degrees in biology were pursuing more advanced studies.

The growing importance of environmental issues in all spheres of activity should result in an increase in the requirement for professionals working in this sector. For graduates in more traditional disciplines, the market outlook over the next few years should remain similar to that of the past few years.

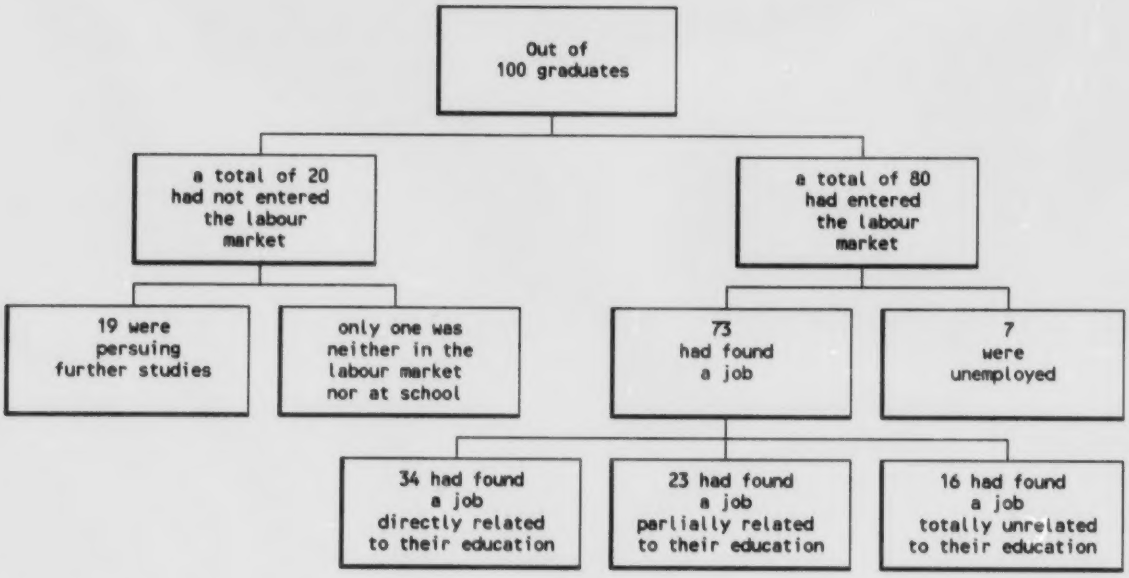
PHYSICAL SCIENCES

CHEMICAL TECHNOLOGIES

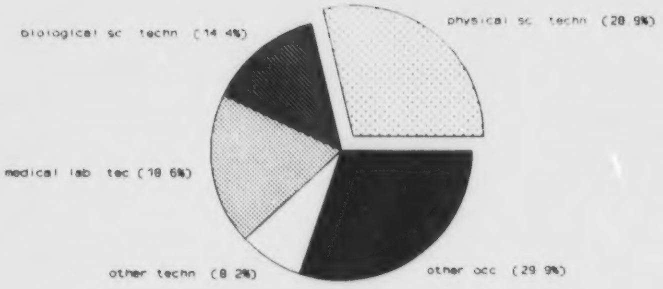
VOCATIONAL COLLEGE DIPLOMA

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 20 had not entered the labour market
a total of 80 had entered the labour market
19 were persuing further studies
only one was neither in the labour market nor at school
73 had found a job
7 were unemployed
34 had found a job directly related to their education
23 had found a job parlially related to their education
16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	190	1.3	0.9
1985/90	195	1.4	1.0
1990/95	170	1.4	0.9
1995/2000	180	1.4	1.0

PHYSICAL SCIENCES

CHEMICAL TECHNOLOGIES
VOCATIONAL COLLEGE DIPLOMA

This field of training includes a number of technologies, such as industrial chemical technology, analytic chemistry, chemical engineering and biochemical and plastics technology. These technologies are offered in the following regions: Lower St. Lawrence, Mauricie-Bois-Francs, Montérégie, Montreal, Outaouais and Saguenay-Lac St-Jean.

Trends and projections

The number of graduates in these disciplines has grown at approximately the same rate as that of the vocational college sector taken as a whole. If this trend continues over the next decade, 190 students will graduate each year.

Occupation after graduation

Compared to university graduates with bachelor's degrees in chemistry, those at the college level entered the labour force in larger numbers immediately after graduation. The placement rate for this group was clearly higher and the jobs were directly related to education. A very large majority of the jobs obtained were full time and permanent.

Occupational profile

Two occupational categories dominated the profile of entry-level jobs. The occupations of natural and physical science workers accounted for 52% of the jobs obtained. Of these, physical science technicians (laboratory and biochemical technicians, etc.) and biology technicians accounted for 30% and 15% of these jobs respectively. Health science technicians, primarily medical laboratory technicians, made up the second category, with 23% of the jobs obtained. The occupational groups of inspectors and foremen/women, although not as high in number, also provided possible means of entry into the labour market. More than 50% of employed graduates were working in a company in the manufacturing sector.

Salary

The average salary of respondents to the 1988 Relance Survey who were employed full time one year after graduation was $19,800 annually.

General picture

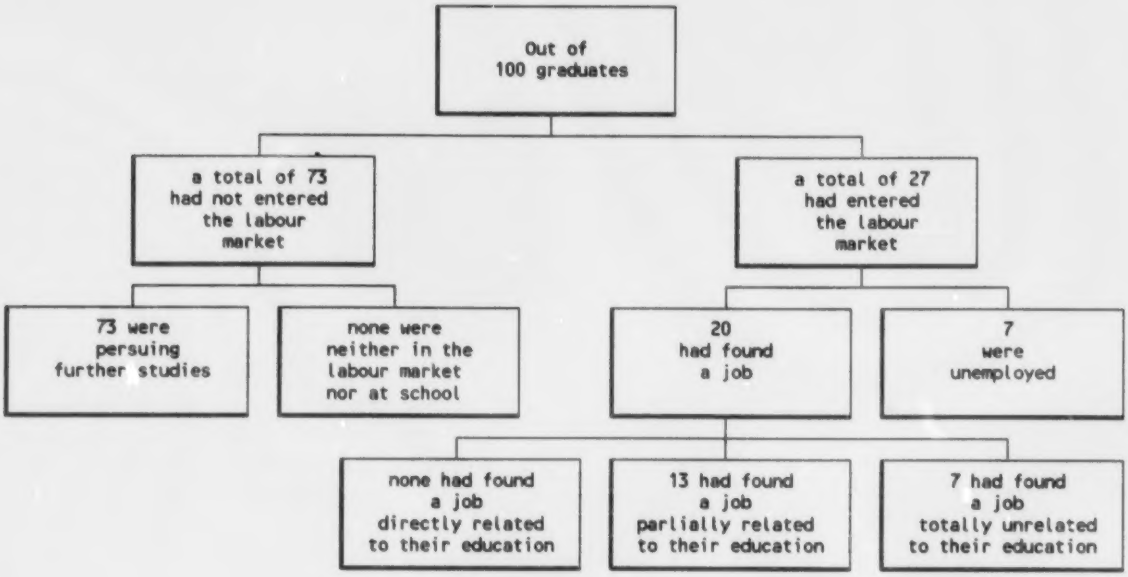
Although slightly lower than the average of college disciplines, the employment outlook for these graduates was more positive than that of their older colleagues with bachelor's degrees. A certain amount of competition therefore exists for some positions.

Over the next few years, the slower employment growth in the manufacturing sector will cause the demand for this personnel to increase at a lower than average rate. These graduates should therefore continue to face stiffer competition on the labour market.

CHEMISTRY
BACHELOR'S DEGREE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 73
had not entered
the labour
market
a total of 27
had entered
the labour
market
73 were
persuing
further studies
none were
neither in the
labour market
nor at school
20
had found
a job
7
were
unemployed
none had found
a job
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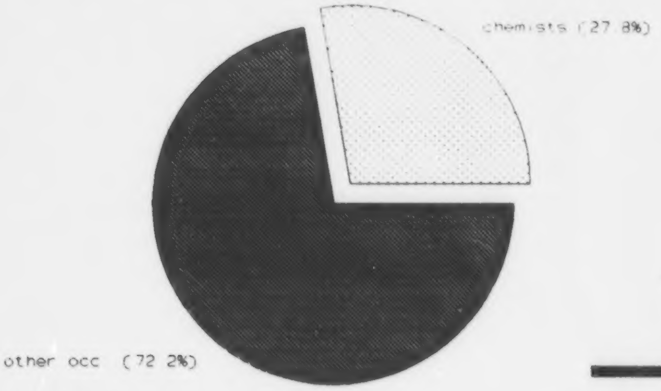
to their education
13 had found
a job
partially related
to their education
7 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	170	0.8	1.2
1985/90	240	1.0	1.0
1990/95	250	1.0	0.5
1995/2000	250	1.0	0.6

CHEMISTRY
BACHELOR'S DEGREE

All disciplines in chemistry, except for geochemistry and biochemistry, are represented in this group. Most Quebec universities offer programs in this field of study. The prerequisites are college level mathematics, physics, chemistry and biology.

Trends and projections

Following a slight drop in popularity in the early 1980s, the relative importance of this field of study in terms of number of graduates returned to the level of the late 1970s. During the 1990s, the proportion is expected to remain at its present level, for an average of 250 graduates annually.

Occupation after graduation

This discipline is intended mainly as a preparation for further studies. According to the survey of graduates, 73% were pursuing their education two years after obtaining their bachelor's degree. Graduates who entered the labour market immediately had one of the highest unemployment rates and a weak link between education and work.

Occupational profile

The occupation profile of these graduates was very diverse. Less than 30% had obtained a job as a chemist.

General picture

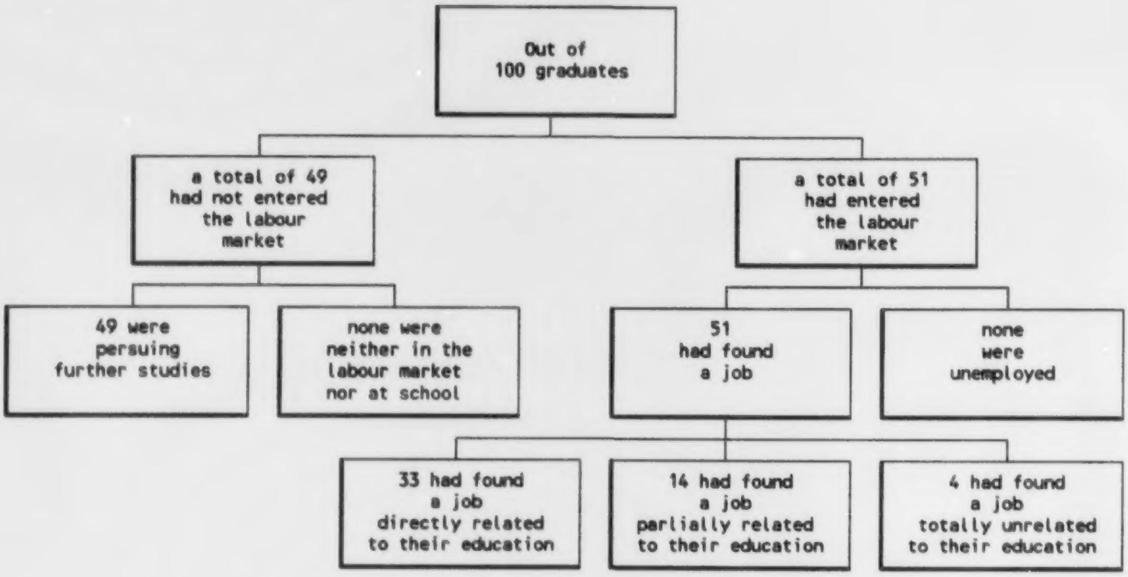
Graduates in this discipline usually have to continue their education to the master's or doctoral level before entering the labour market. For those who do not pursue their studies, labour market prospects are very much below the average for graduates with bachelor's degrees in other disciplines.

CHEMISTRY

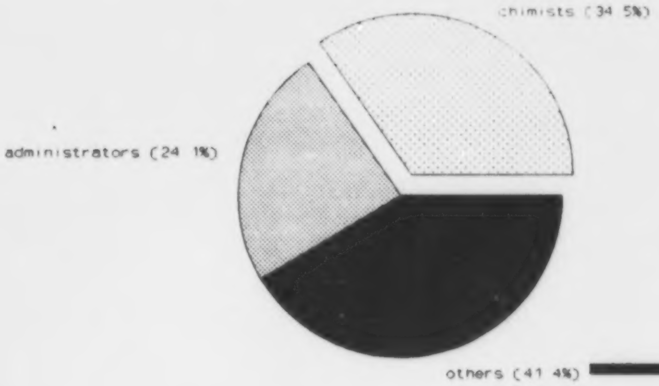
PHYSICAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 49 had not entered the labour market
a total of 51 had entered the labour market
49 were persuing further studies
none were neither in the labour market nor at school
51 had found a job
none were unemployed
33 had found a job directly related to their education
14 had found a job parlially related to their education
4 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	70	1.7	2.2
1985/90	80	1.6	1.0
1990/95	80	1.7	0.7
1995/2000	70	1.7	0.9

CHEMISTRY
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer graduate programs in chemistry. Note that biochemistry has been classified under agricultural sciences and geochemistry under geology.

Trends and projections

During the 1980s, the number of graduates in this discipline grew at an average rate, rising from 70 to 80. If the current proportion is maintained, the number of graduates should drop slightly over the coming years to reach its 1980 level at the end of the decade.

Graduates' labour market participation

As in the case of bachelor's degrees, an above average percentage of graduates had decided to pursue their education two years after graduation. Their employment situation was favourable, however: all respondents who had entered the labour market had found a job. The link between employment and education was comparable with that of jobs held by other graduates with master's degrees or doctorates.

Occupational profile

The group of chemists accounted for more than 30% of jobs held two years after graduation. Other occupational groups in the natural and physical sciences accounted for nearly 15% of jobs. As in the case of other graduates with advanced degrees, positions as research and teaching assistants in universities provided job opportunities for graduates, with nearly 20% of jobs.

Salary

The average annual salary ($31,000) of respondents working full time was slightly below average.

General picture

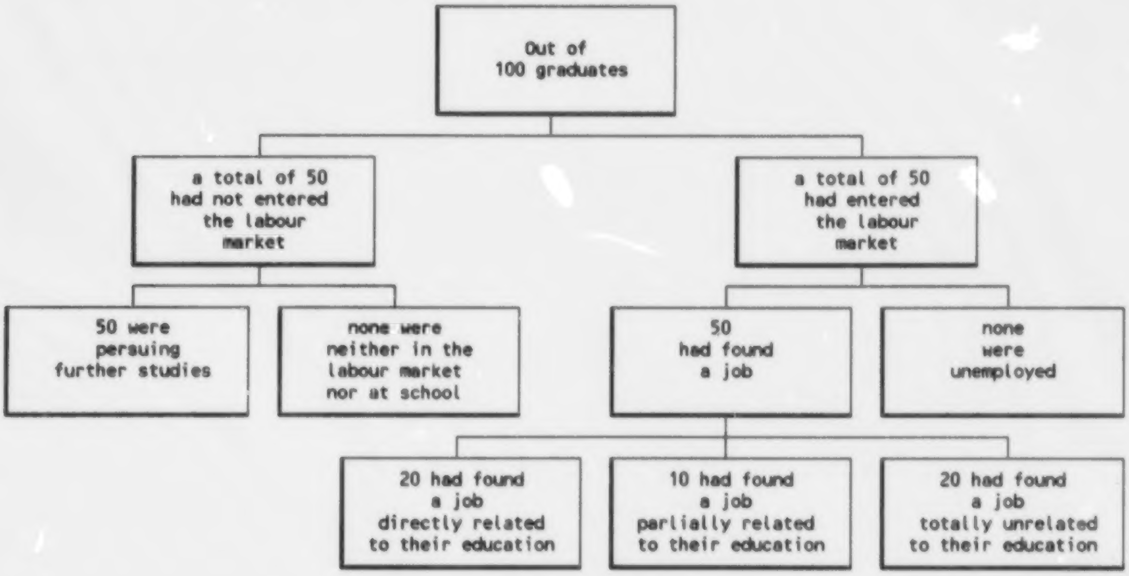
Although there are more job opportunities than for graduates with bachelor's degrees, they are below average in comparison with those available to graduates with master's degrees or doctorates as a whole.

GEOLOGY

BACHELOR'S DEGREE

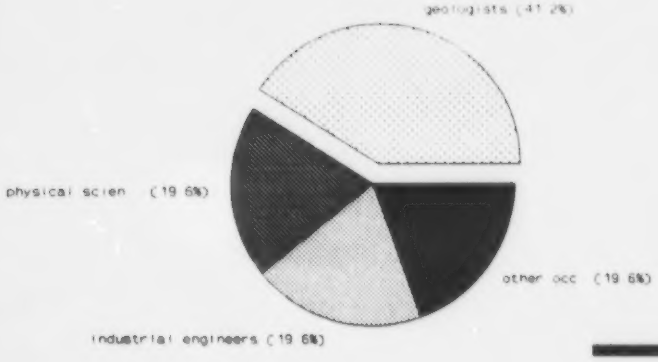
PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 50
had not entered
the labour
market
a total of 50
had entered
the labour
market
50 were
persuing
further studies
none were
neither in the
labour market
nor at school
50
had found
a job
none
were
unemployed
20 had found
a job
directly related
to their education
10 had found
a job
parlially related
to their education
20 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	110	0.5	0.7
1985/90	130	0.5	1.0
1990/95	125	0.5	0.5
1995/2000	125	0.5	0.6

PHYSICAL SCIENCES

GEOLOGY
BACHELOR'S DEGREE

This field of study encompasses the specialties of geochemistry, geophysics, paleontology, crystallography and other geological sciences. These programs are offered at Concordia, Laval, McGill, Montréal, UQAM and UQAC. Prerequisites include college level mathematics, physics, chemistry and biology.

Trends and projections

The trend in number of graduates was the same as for graduates with bachelor's degrees taken as a whole. If current trends continue, Quebec universities will grant an average of 125 bachelor's degrees in this field annually during the 1990s.

Occupation after graduation

Among 1986 graduates, the proportion of those who pursued their studies after graduation was markedly higher than average. Most graduates who had decided to enter the labour market were working, but the link between education and work was below average.

Occupational profile

Given the small number of respondents who were employed, the occupational profile of these graduates was very diverse. However, the information shows that some jobs as geologists were open to these graduates.

Salary

The average annual salary of survey respondents who were working full time was $26,000, a level corresponding to the average.

General picture

Throughout the 1980s, job opportunities for these graduates were below average. Because of a resumption of prospecting in some regions of Quebec (especially Abitibi), overall conditions tended to improve during the second half of the 1980s.

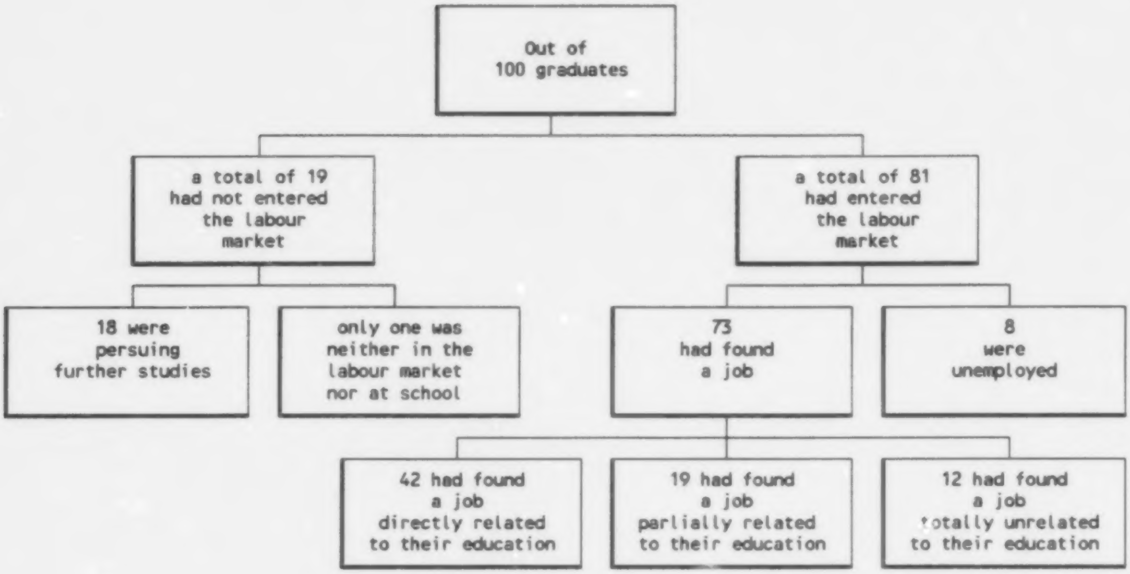
The 1990s should see a return to the level of requirements obtaining during the first half of the 1980s in Quebec. A tightening of the market is likely to follow, and job opportunities will probably remain below average.

COMPUTER SCIENCE

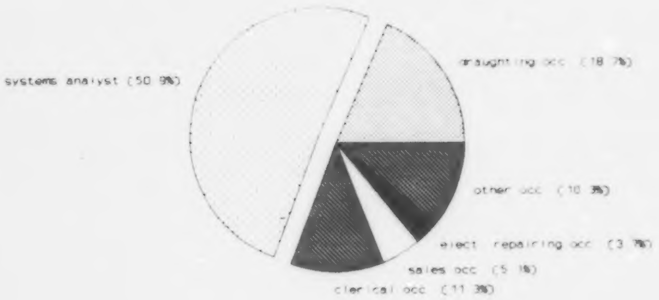
VOCATIONAL COLLEGE DIPLOMA

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
18 were persuing further studies
only one was neither in the labour market nor at school
73 had found a job
8 were unemployed
42 had found a job directly related to their education
19 had found a job parlially related to their education
12 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	1325	8.9	1.1
1985/90	1535	10.8	1.0
1990/95	1335	10.5	1.2
1995/2000	1390	10.5	1.1

COMPUTER SCIENCE
VOCATIONAL COLLEGE DIPLOMA

This field of training encompasses specialized disciplines in computerized systems technology and computer science. The computer science study program is available in all Quebec regions. Candidates wishing to acquire training in systems technology can do so at present in five regions out of twelve, namely the North Shore, Eastern Townships, Montreal, Outaouais and Quebec City regions.

Trends and projections

The number of graduates in these disciplines has grown more rapidly than average over the last 10 years, going from 3% to more than 10% of the vocational sector between the beginning and the end of the decade. The increased popularity of computer science technologies was noted primarily in the first half of the 1980s whe their relative importance reached a peak of 11%. It has remained stable since then.

Occupation after graduation

One year after completing their studies, the participation rate of these graduates was comparable to the average of the sectors. This proportion is quite similar to the proportion of graduates who decided to pursue further studies. Of the candidates who chose to enter the labour market, the 10% unemployment rate was just above the average for all college disciplines taken as a whole. The relation between education and work tended to be close.

Occupational profile

Two groups dominated the occupational profile of these graduates in the year after they completed their studies. More than 50% of employed graduates were working as analysts-programmers and 20% as designers. Although to a lesser extent, the jobs of installers and repairers of electronic devices also constituted a significant proportion of entry-level jobs for these graduates.

Salary

The average salary of respondents to the Relance Survey who were working full time one year after completing their studies was $19,200 annually, i.e. a higher salary level than that of other college graduates taken as whole.

General picture

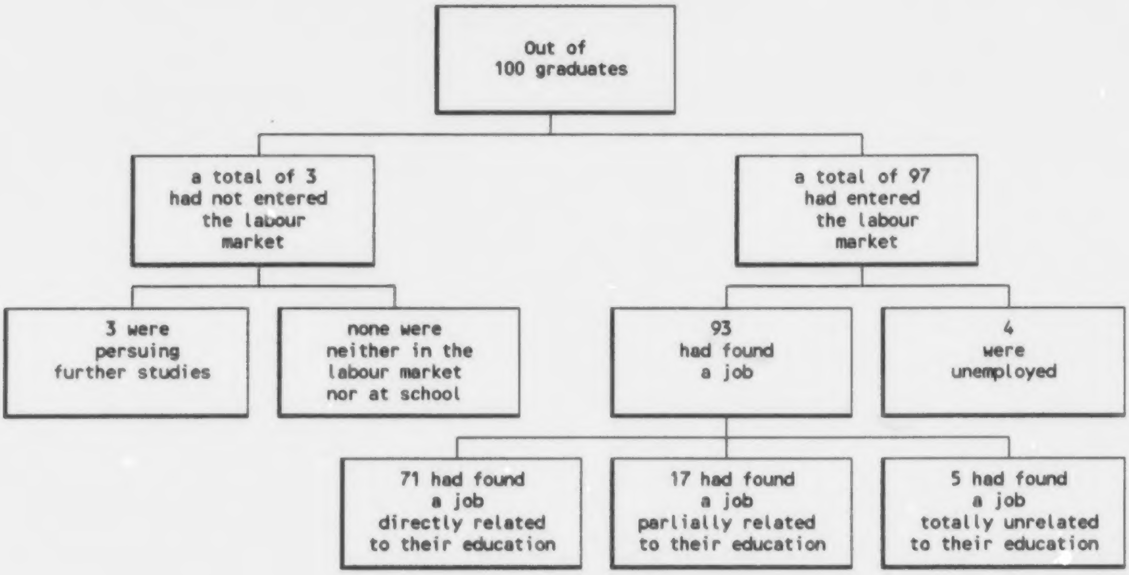
Over the last few years, graduates in these disciplines have entered a booming market in which rapid labour requirement growth made it possible to effectively absorb increasingly higher numbers of graduates. Employment opportunities have also remained more or less stable throughout the decade.

During the 1990s, the more advanced development of microcomputing and third and fourth generation software as well as the teaching of basic computer skills in a number of study programs will have the effect of limiting the market for less qualified programmers. College graduates oriented towards more traditional commercial applications will very likely face a congested market. On the other hand, graduates with skills in the application of computer technology to computer-assisted manufacturing equipment (CAM) will continue to be active in a market characterized by a shortage of specialized labour.

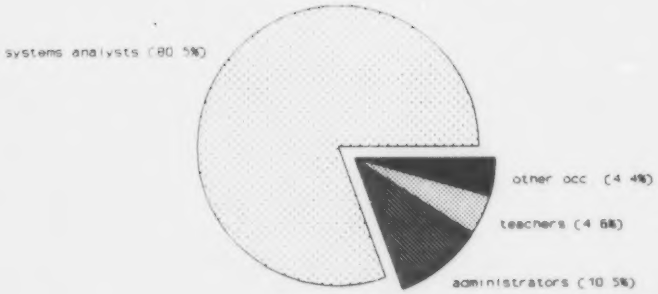
COMPUTER SCIENCE — PHYSICAL SCIENCES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 3 had not entered the labour market
a total of 97 had entered the labour market
3 were persuing further studies
none were neither in the labour market nor at school
93 had found a job
4 were unemployed
71 had found a job directly related to their education
17 had found a job partially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	515	2.3	1.6
1985/90	770	3.1	1.0
1990/95	775	3.0	1.0
1995/2000	800	3.1	1.0

COMPUTER SCIENCE
BACHELOR'S DEGREE

This field of study encompasses the specific disciplines of computer science, engineering computer science, management computer science and computer science-mathematics. Most Quebec universities offer programs in one or another of these disciplines. Prerequisites may vary depending on discipline, but a good grounding in mathematics is usually required.

Trends and projections

During the 1980s, the popularity of this field of study grew constantly. While graduates accounted for 1% of all bachelor's degrees in 1980, the proportion had reached 3% by 1989. If this percentage remains constant, the number of graduates in these disciplines could reach an average of 775 to 800 a year.

Occupation after graduation

A much greater than average percentage entered the labour market immediately after graduation, while barely 3% pursued further studies. The placement rate of those entering the labour market was among the highest of all graduates with bachelor's degrees, and the unemployment rate among the lowest. Moreover, the link between education and work was close, given that 70% of employed graduates reported that their jobs were directly related to their studies.

Occupational profile

The close link between education and work is clearly reflected in the high number of graduates holding positions as programmer/analysts (80% of jobs). The management groups, for their part, offered a not insignificant number of openings, accounting for approximately 10% of jobs. The teaching sector also provided a possible entry to the labour market.

Salary

The average salary reported by respondents to the 1988 survey who were working full time was quite comparable to that of other graduates with bachelor's degrees. It was $28,000 two years after graduation.

General picture

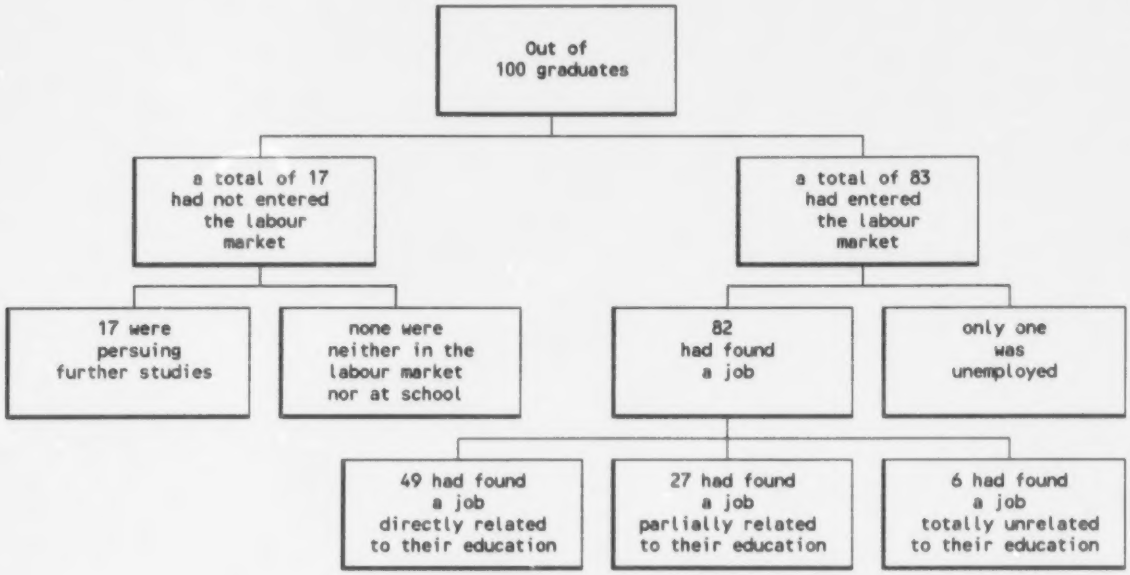
The above statistics confirm that these graduates found a labour market offering better than average job opportunities. This was so despite that fact that a drop in the number of job openings was observed during the second half of the 1980s due to a quick jump in the number of graduates.

If the number of graduates grows as expected, labour market prospects should remain steady over the coming decade. There may, however, be a few more graduates than anticipated, and as occurred in the recent past, job openings may decline slightly. Nevertheless, labour market job opportunities should remain better than the average.

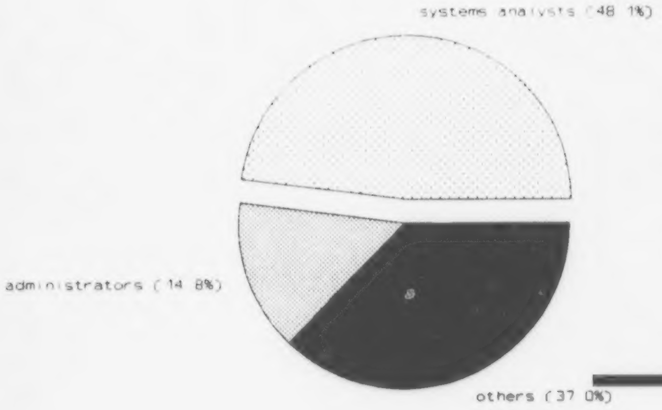
COMPUTER SCIENCE
MASTER'S DEGREE AND DOCTORATE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
17 were persuing further studies
none were neither in the labour market nor at school
82 had found a job
only one was unemployed
49 had found a job directly related to their education
27 had found a job parlially related to their education
6 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	60	1.5	1.8
1985/90	100	2.0	1.0
1990/95	95	2.0	1.1
1995/2000	90	2.0	1.2

COMPUTER SCIENCE
MASTER'S DEGREE AND DOCTORATE

Graduate programs in computer science are offered at Concordia, Laval, McGill and Montréal. In addition, the University of Quebec at Montreal offers graduate programs in management informatics.

Trends and projections

As a result of the growing popularity of computer science, the number of graduates rose from 1% in the early 1980s to more than 2% by the end of the decade. The percentage is expected to level off in the coming decade. If so, an average of 90 to 100 students will graduate with master's degrees or doctorates in this field annually during the 1990s.

Graduates' labour market participation

According to Statistics Canada's survey of 1986 graduates two years after they obtained their degrees, 83% had entered the labour market, comparable with the average for all disciplines. The placement rate, 98%, was above average, and the unemployment rate was much below average: 1.2% compared with 6% for all graduates as a whole. According to respondents, the link between job and education was generally strong, and 90% said their duties were at least partly related to their studies.

Occupational profile

Nearly 50% of positions held by respondents two years after graduation were positions as system analysts. The group of university teachers accounted for 16% of jobs found. Unlike other graduates with advanced degrees working in the university, these graduates held regular teaching positions rather than positions as research or teaching assistants. This is due in large part to the fact that the discipline is young, and therefore the demand for teachers has grown rapidly. The importance of management and engineering positions in the occupational profiles of these graduates is an indication that studies in computer science can complement degrees in other disciplines.

Salary

The average annual salary of respondents working full time two years after graduation was $39,700.

General picture

Although growing less rapidly during the second half of the last decade, the demand for people to fill directly related jobs was great enough to maintain labour market entry conditions slightly above average. The occupational diversity of these graduates is an indication that graduate work in computer science can be easily incorporated into a interdisciplinary training plan and enhances job opportunities.

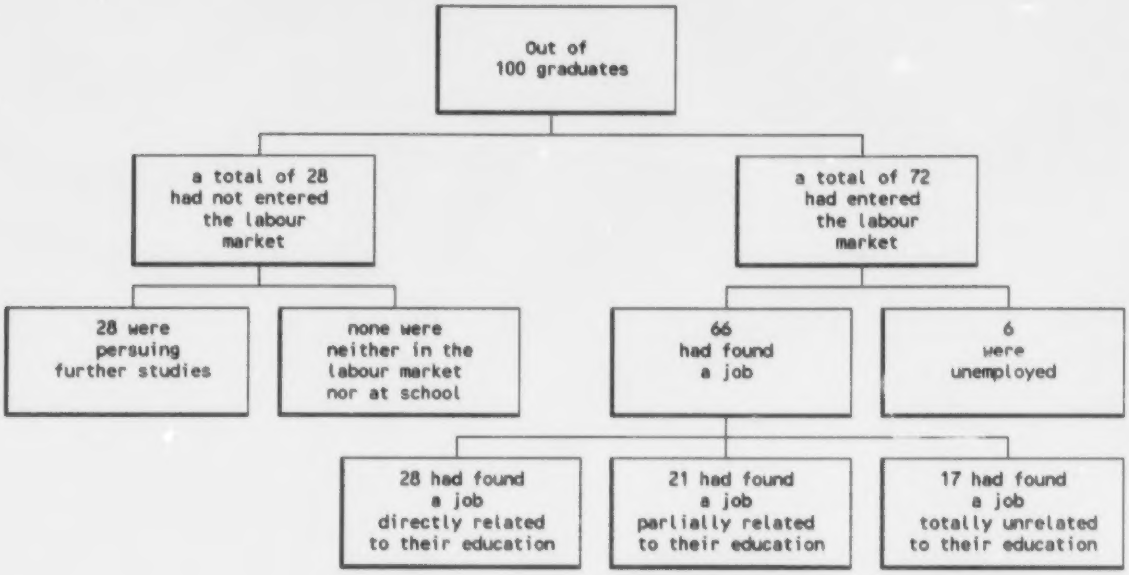
During the 1990s, job prospects in related occupations should remain above average, as skills at this level of specialization remain in demand.

MATHEMATICS

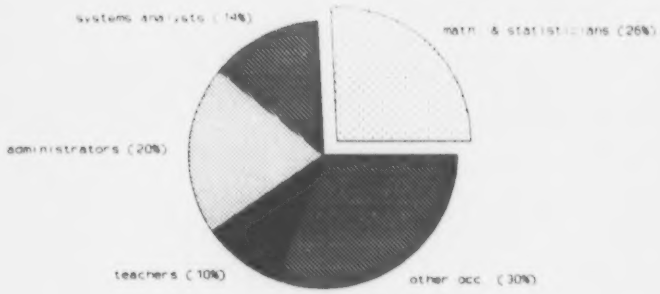
BACHELOR'S DEGREE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 28 had not entered the labour market
a total of 72 had entered the labour market
28 were persuing further studies
none were neither in the labour market nor at school
66 had found a job
6 were unemployed
28 had found a job directly related to their education
21 had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	325	1.5	1.6
1985/90	485	2.0	1.0
1990/95	500	2.0	1.0
1995/2000	500	1.9	1.0

PHYSICAL SCIENCES

MATHEMATICS
BACHELOR'S DEGREE

This group includes the disciplines of actuarial science, statistics and other areas of mathematics. Concordia, Bishop's, Laval, McGill, Montréal, Sherbrooke and the Montréal and Trois-Rivières campuses of the University of Quebec offer programs in mathematics with the possibility of specialization. Prerequisites vary depending on institution, but of course a good grounding in mathematics is always required.

Trends and projections

From 327 between 1980 and 1985, the average number of graduates rose to 490 in the second half of the decade, an above average rate of growth. During the 1990s, the number of graduates should remain about the same (500 annually).

Occupation after graduation

Labour market entry from these graduates was quite similar to that of other graduates with bachelor's degrees in terms of both placement and unemployment rate. However, jobs tended to be less directly related to education.

Occupational profile

Mathematicians, statisticians and actuaries comprise the occupational group offering the most job opportunities for these graduates (25%). The groups of systems analysts and financial officers are the other two groups in which jobs related to education have been available.

Salary

The average salary reported by respondents to the 1988 survey who were working full time was $28,000 annually. This is close to the average for graduates with bachelor's degrees.

General picture

Since the number of graduates increased faster than requirements over the second half of the 1980s, job opportunities in related occupations diminished somewhat. This reduced labour market access in this discipline to below average.

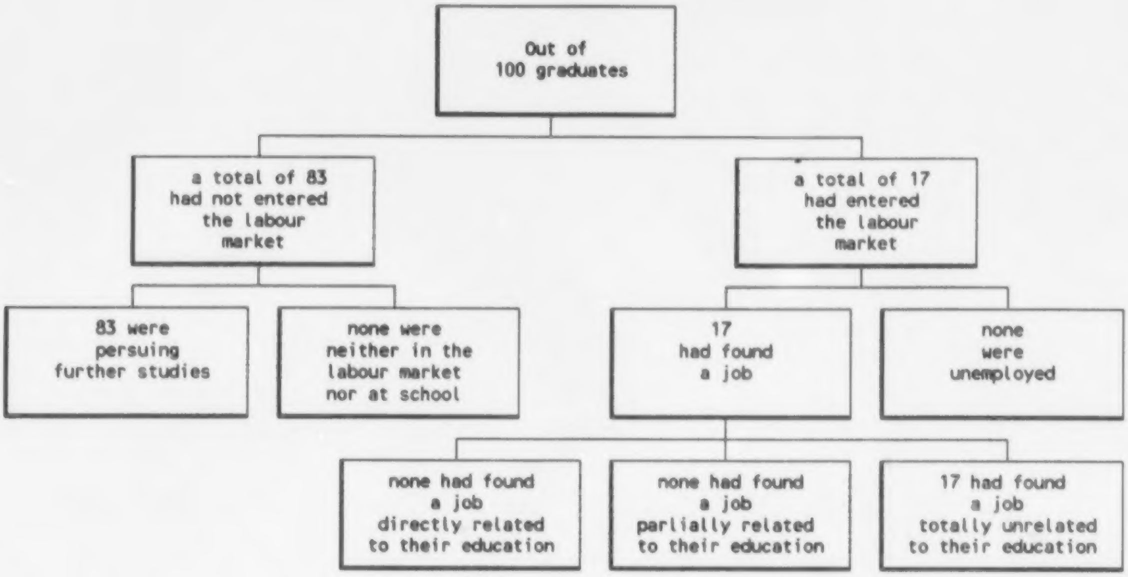
During the 1990s, the labour market situation is likely to be similar to that obtaining over the past few years. Any increase in requirements is likely to be in computer science occupations rather than in those of mathematicians and statisticians.

PHYSICS

BACHELOR'S DEGREE

PHYSICAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 83 had not entered the labour market
a total of 17 had entered the labour market
83 were persuing further studies
none were neither in the labour market nor at school
17 had found a job
none were unemployed
none had found a job directly related to their education
none had found a job parlially related to their education
17 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES

non available

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	140	0.6	0.8
1985/90	170	0.7	1.0
1990/95	175	0.7	0.5
1995/2000	175	0.7	0.6

PHYSICS
BACHELOR'S DEGREE

This group of disciplines encompasses the specialties of astronomy, electricity, mechanics, optics, oceanography, theoretical physics, thermal physics, mathematical physics and other physical sciences. Most Quebec universities offer a bachelor's program in physics. Mathematics, physics, chemistry and biology are prerequisites in addition to a Diploma of Collegial Studies.

Trends and projections

Between 1980 and 1989, the number of graduates in this discipline rose at more or less the same rate as the average. If this trend continues, 175 students will graduate each year during the 1990s.

Occupation after graduation

The large majority of graduates pursue higher level studies. The others are generally active in the labour market but the positions they hold have very little relation to their education.

Occupational profile

Given the small number of employed graduates and the weak link between the positions they hold and their education, it was not possible to establish an occupational profile from the available data.

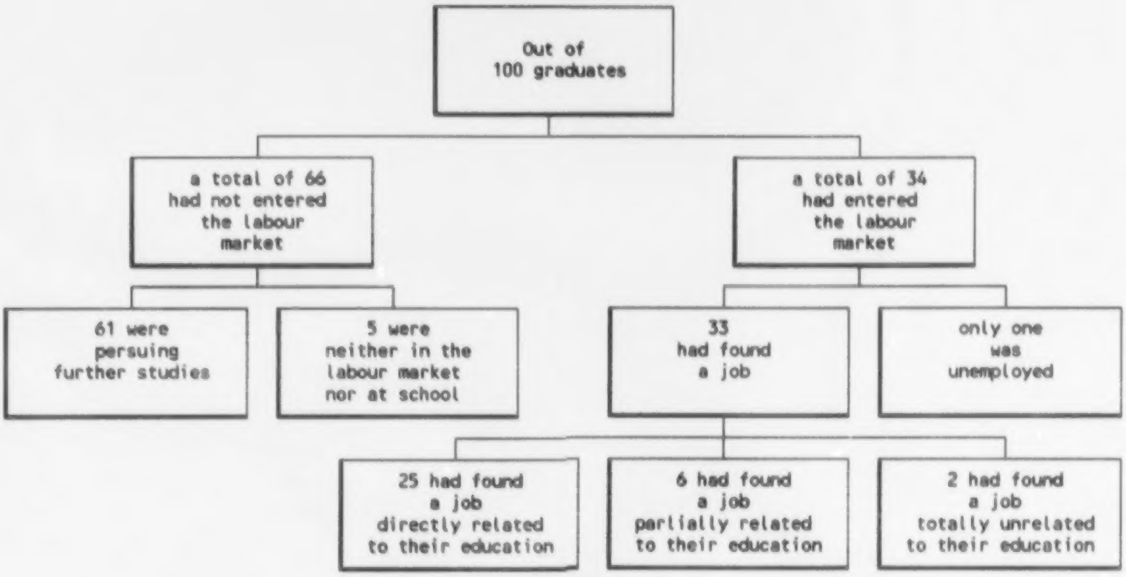
General picture

These graduates usually pursue studies at the master's level. Opportunities for related employment after completing a bachelor's degree are very few.

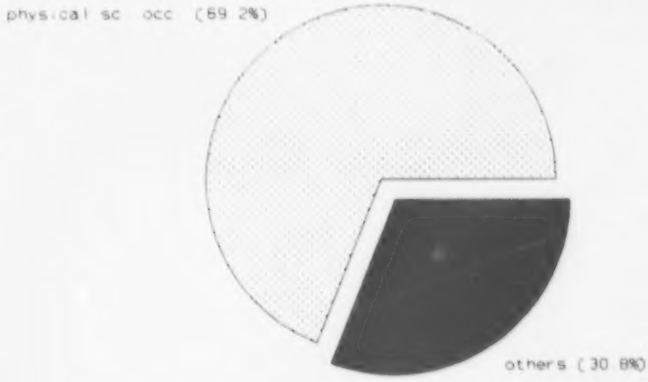
OTHER PHYSICAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 66 had not entered the labour market
a total of 34 had entered the labour market
61 were persuing further studies
5 were neither in the labour market nor at school
33 had found a job
only one was unemployed
25 had found a job directly related to their education
6 had found a job partially related to their education
2 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	2.1	1.8
1985/90	125	2.4	1.0
1990/95	120	2.5	0.9
1995/2000	110	2.5	1.0

OTHER PHYSICAL SCIENCES
MASTER'S DEGREE AND DOCTORATE

Various institutions offer graduate programs in physics, meteorology, oceanography, crystallography and fluid mechanics.

Trends and projections

During the 1980s, these disciplines accounted for 2.5% of graduate degrees. If this trend continues over the coming years, there will be an average of 30 graduates in these fields a year in Quebec.

Graduates' labour market participation

Like graduates with bachelor's degrees, a high percentage of these graduates were continuing their education two years after graduation. Of those who had decided to enter the labour market, most of them held jobs more or less directly related to their education.

Occupational profile

Nearly 70% of graduates working two years after graduation held jobs in the natural sciences, physics or engineering. Physicists, biologists and geologists accounted for the greatest number of jobs.

Salary

The average annual salary of 1986 graduates working full time and who responded to the 1988 survey was $35,800.

General picture

The high percentage of graduates who decided to pursue further studies after obtaining a master's degree or doctorate is an indication of the limited demand for these professionals. Further education is often required for successful labour market entry.

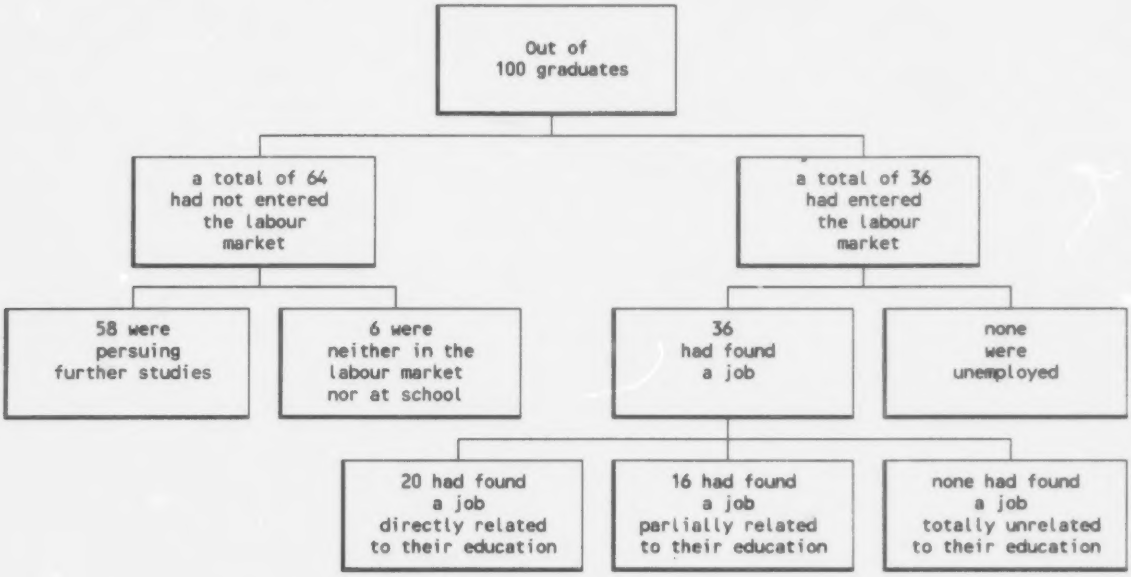
SOCIAL SCIENCES

LAW

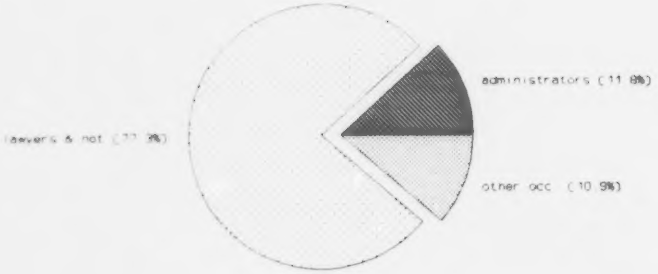
BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 64 had not entered the labour market
a total of 36 had entered the labour market
58 were persuing further studies
6 were neither in the labour market nor at school
36 had found a job
none were unemployed
20 had found a job directly related to their education
16 had found a job partially related to their education
none had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	835	3.8	1.3
1985/90	875	3.5	1.0
1990/95	875	3.4	1.0
1995/2000	900	3.5	0.9

LAW
BACHELOR'S DEGREE

This field of study comprises the various specialties in law and jurisprudence. Most Quebec universities offer a program in this discipline. There is no specific prerequisite but high academic standing at the college level is required.

Trends and projections

The number of graduates in this discipline has remained steady at approximately 900 annually during the 1980s. This has meant that the proportion of these graduates to the total number of graduates with bachelor's degrees dropped from 4% to 3.5% between 1980 and 1989. During the 1990s, the number of graduates is expected to remain at approximately 900 annually.

Occupation after graduation

Because of the requirement that these graduates take a year of courses at the Quebec Bar's professional training school and article for six months in a lawyer's office, the proportion of graduates pursuing further studies two years after graduation is very much higher than that of other graduates at the same level. Among those who had entered the labour market, the rate of placement in related occupations was much greater than that in other disciplines.

Occupational profile

The occupations pursued by graduates two years after obtaining their degrees show clearly the close link with their discipline. More than 75% of them were working as lawyers or notaries.

General picture

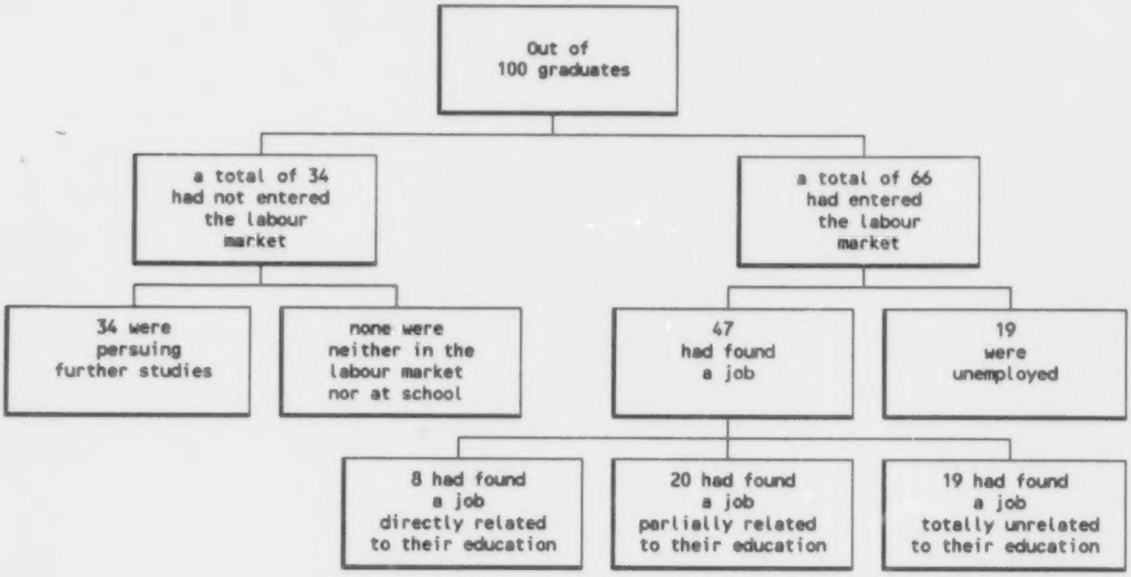
Unfortunately we have no data on salaries, but the very high placement rate of graduates in the labour market and the very close link between jobs and education would indicate that job entry conditions for these graduates are better than average. However, the high proportion of those who were continuing their education two years after obtaining their degrees reveals the potential difficulty some candidates have in being called to the Bar.

During the coming years, labour market entry conditions should remain about the same as those that have prevailed over the past number of years.

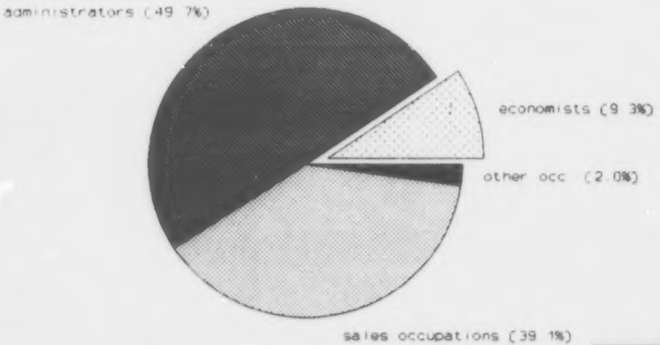
ECONOMICS
BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 34
had not entered
the labour
market
a total of 66
had entered
the labour
market
34 were
persuing
further studies
none were
neither in the
labour market
nor at school
47
had found
a job
19
were
unemployed
8 had found
a job
directly related
to their education
20 had found
a job
parlially related
to their education
19 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

**TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK**

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	545	2.5	2.1
1985/90	685	2.8	1.0
1990/95	700	2.7	1.1
1995/2000	700	2.7	1.1

In addition to general studies in economics, this field of study includes programs in applied economics generally offered in departments of administration. Most Quebec universities offer programs of studies in these disciplines. Specific mathematics courses are generally required in addition to a Diploma of Collegial Studies.

Trends and projections

During the 1980s, the number of graduates in this field of study grew at a slightly faster rate than in other disciplines, reflecting a growing interest in economics in general. If the trends of the past few years continue, an average of 700 students annually will graduate in economics over the coming decade.

Occupation after graduation

According to the 1988 survey of graduates, less than 50% of students who graduated in this discipline were employed two years after obtaining their degrees. This was appreciably below the average for graduates with bachelor's degrees taken as a whole. Similarly, jobs directly related to education were less frequent than for the whole group. It is therefore not surprising to note that more of these graduates had decided to pursue further studies.

Occupational profile

Approximately 50% of these graduates were working in the management sector. The major group of salespersons also accounted for a sizeable number of openings, with nearly 40% of positions held. Economists accounted for less than 10% of total jobs.

Salary

The average annual salary of $26,700 reported by respondents working full time was close to that for graduates with bachelor's degrees taken as a whole.

General picture

The relatively high unemployment rate and small number of jobs directly related to education denote a tight labour market for these graduates. This probably explains in large measure the small proportion of graduates who would make the same academic choice: only 40% compared with nearly 70% of graduates with bachelor's degrees taken as a whole. On the other hand, the significant number of these graduates holding jobs in management and sales indicates that this training opens doors to opportunities in a related, less encumbered market.

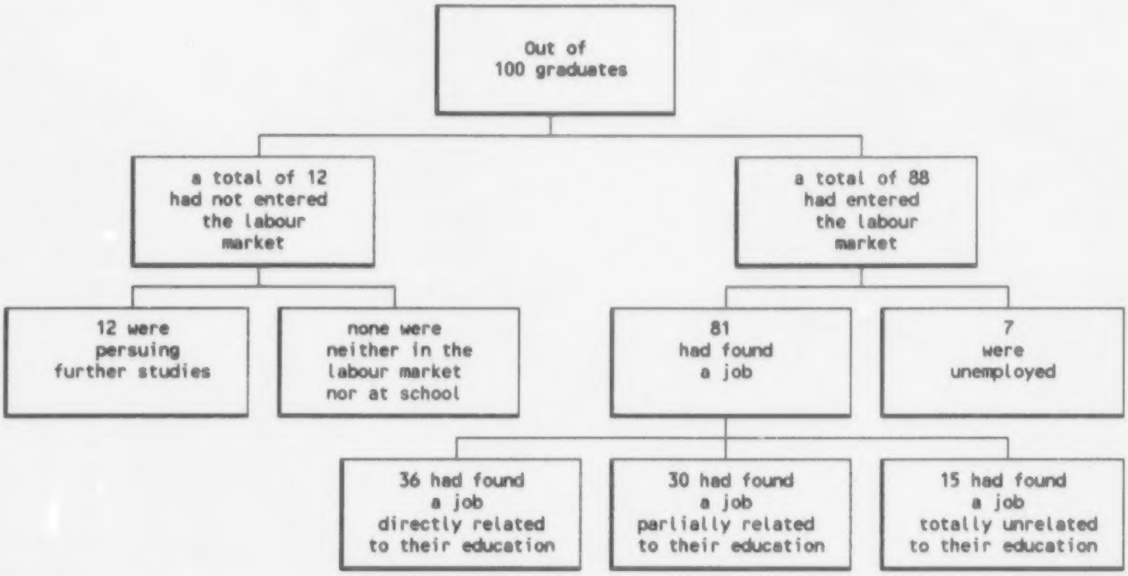
During the 1990s, the labour market for graduates who would like to work as economists is likely to remain very difficult, because of the great number of graduates and the industrial concentration of this occupation, dominated by the public service. The more open management market, however, will continue to provide graduates interested in working in this sector with more optimistic prospects.

ECONOMICS

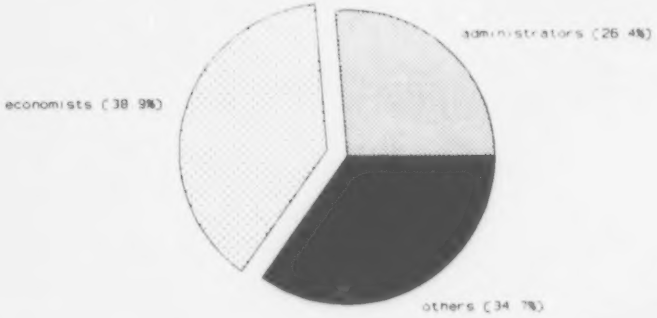
SOCIAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 12 had not entered the labour market
a total of 88 had entered the labour market
12 were persuing further studies
none were neither in the labour market nor at school
81 had found a job
7 were unemployed
36 had found a job directly related to their education
30 had found a job partially related to their education
15 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	85	2.1	2.1
1985/90	110	2.2	1.0
1990/95	100	2.0	1.3
1995/2000	90	2.0	1.5

SOCIAL SCIENCES

ECONOMICS
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer master's and doctoral programs in economics. Laval and McGill offer master's programs in rural economics.

Trends and projections

During the 1980s, the number of graduates in this discipline grew at approximately the same rate as that for all disciplines as a whole. If the trend continues in the next decade, an average of 90 to 100 degrees will be granted each year.

Graduates' labour market participation

According to the 1988 survey of 1986 graduates, a percentage slightly higher than the average had entered the labour market two years after graduation. Their placement rate, however, was slightly below that for other disciplines, resulting in an unemployment rate of 9% compared with 6% for graduates with master's degrees or doctorates as a whole. Placement in occupations related to education was below average but better than the rate for graduates with bachelor's degrees.

Occupational profile

The proportion of graduates with master's degrees or doctorates working as economists was 40%, compared with 10% for graduates with bachelor's degrees. Another 25% were working as managers, including 12% as financial officers.

Salary

The average annual salary of these graduates was comparable with that for graduates with advanced degrees as a whole ($38,000).

General picture

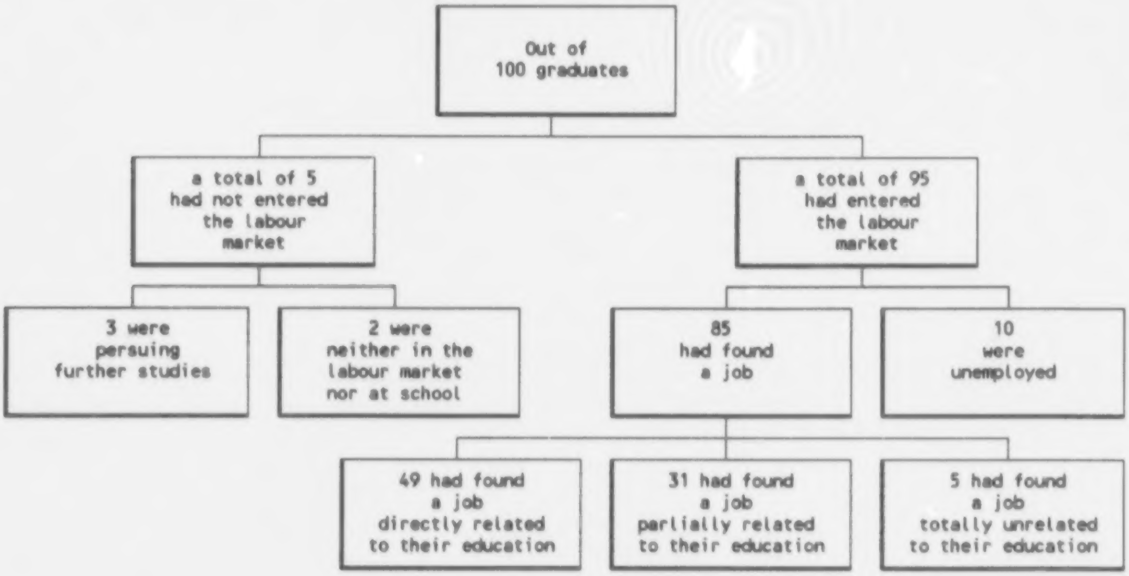
Job opportunities for postgraduates in economics have improved significantly in relation to those available to graduates with bachelor's degrees. Both groups, however, have shown a decline over the past decade, with job opportunities dropping from abundant to average.

Trends in demand for people to fill jobs related to education in this field are expected to mean somewhat improved job opportunities. Compared with other types of training, graduate degrees in economics should continue to provide average access to the labour market.

HUMAN ENVIRONMENT — SOCIAL SCIENCES

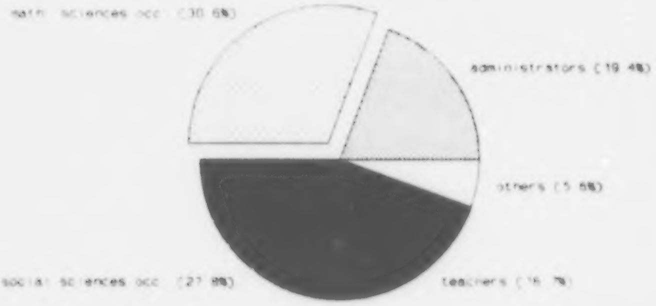
MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 5 had not entered the labour market
a total of 95 had entered the labour market
3 were persuing further studies
2 were neither in the labour market nor at school
85 had found a job
10 were unemployed
49 had found a job directly related to their education
31 had found a job partially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	115	2.8	1.3
1985/90	130	2.6	1.0
1990/95	140	3.0	1.2
1995/2000	140	3.2	1.3

SOCIAL SCIENCES

HUMAN ENVIRONMENT
MASTER'S DEGREE AND DOCTORATE

This field of multidisciplinary training is composed of specialties in land use and regional development (Laval), environmental sciences (UQAM, UQTR and Sherbrooke), regional studies (UQAC) and urbanism (McGill and Montréal). In certain cases, training in this field of specialization may be obtained through other programs. The most relevant disciplines include biology, chemistry, geography, economics, engineering and architecture.

Trends and projections

The percentage of graduates in these disciplines has remained constant over the past number of years, although the composition of the specialties have changed considerably. Greater concern for the environment has led to the development of specialized programs, and this has changed the nature of the degrees granted. This field of study is very likely to gain in popularity among graduate students in the coming years.

Graduates' labour market participation

According to the 1988 survey of 1986 graduates, the labour market participation rate of these graduates was above average: barely 3% were pursuing further studies two years after graduation, compared with an average of 16% in other disciplines. The 10% unemployment rate among those who had entered the labour market was above average. On the other hand, the vast majority of jobs found were related to education.

Occupational profile

The varied occupational profile of graduates employed two years after graduation reflects the multidisciplinary dimension of this field of training. Nearly 30% of jobs were in the natural sciences and engineering category, another 30% in social sciences (including 20% in the group of economists), 20% in the management category, and 15% in teaching.

Salary

The average annual salary of survey respondents was $32,000, slightly lower than the average for graduates with master's degrees or doctorates as a whole.

General picture

Over the past number of years, labour market entry opportunities in these disciplines were average compared with those in other disciplines. The unemployment rate was slightly above average, but this seems to be more a reflection of the high labour market participation rate than the result of a lack of openings in related occupations.

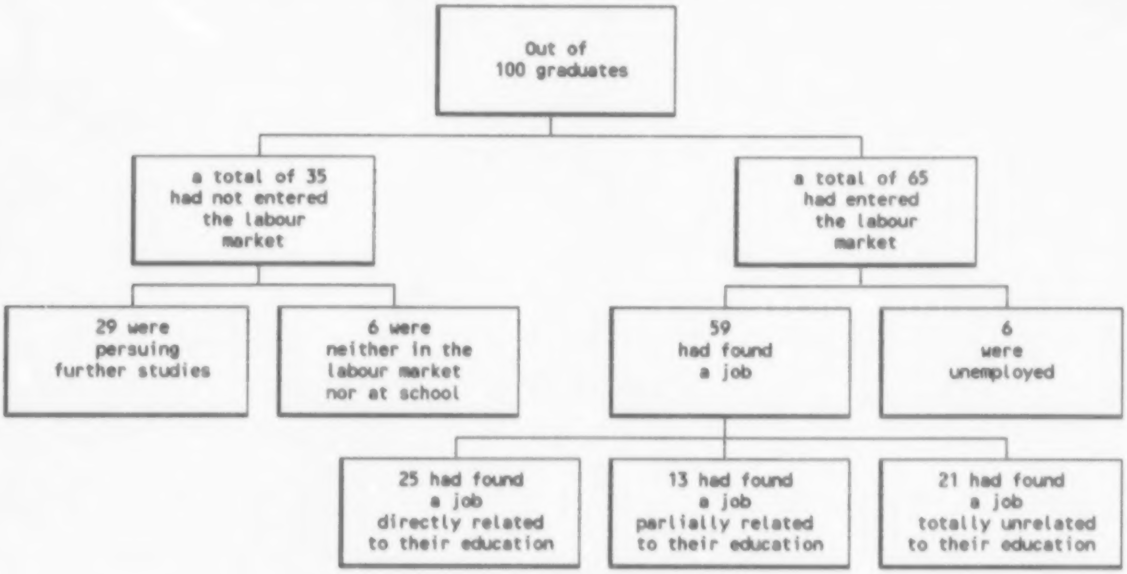
The 1990s should offer encouraging prospects for these graduates. Greater demand in occupations related to environmental issues is expected, in particular for people with training in the natural sciences and engineering.

GEOGRAPHY

BACHELOR'S DEGREE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 35
had not entered
the labour
market
a total of 65
had entered
the labour
market
29 were
persuing
further studies
6 were
neither in the
labour market
nor at school
59
had found
a job
6
were
unemployed
25 had found
a job
directly related
to their education
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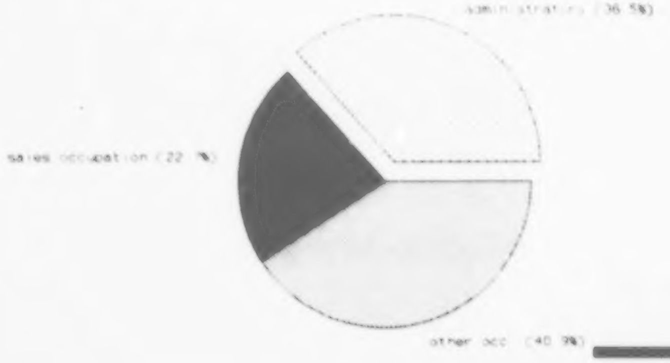
a job
partially related
to their education
21 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	265	1.2	0.2
1985/90	240	1.0	1.0
1990/95	250	1.0	1.0
1995/2000	250	1.0	0.9

SOCIAL SCIENCES

GEOGRAPHY
BACHELOR'S DEGREE

In addition to the geography programs available at most Quebec universities, Concordia, McGill, Sherbrooke and UQAM offer programs in physical geography. Prerequisites for the latter include more advanced mathematics courses in addition to the Diploma of Collegial Studies required for the geography program.

Trends and projections

Since the early 1980s, the popularity of this program has been declining, the number of graduates dropping from 375 to 250. If this proportion remains constant, approximately 250 students a year will graduate in geography.

Occupation after graduation

According to the survey of graduates, the participation rate of graduates in geography was slightly lower than that of graduates with bachelor's degrees taken as a whole. This was the result of a lower employment rate and a higher proportion of graduates pursuing further studies than the average. Although nearly 65% of employed graduates were working in jobs at least partially related to their education, this percentage is somewhat lower than the average for graduates with a first degree.

Occupational profile

Only slightly more than 10% of employed graduates held jobs in the social sciences occupations, including geographers. The other employed graduates were working in jobs related to administration.

Salary

The average annual salary of these respondents to the survey of graduates was $24,700.

General picture

The information presented above reveals a labour market situation less favourable than the average. Traditionally openings for these graduates have been in the federal and provincial public services, which have made significant budget cuts over the past few years. A markedly lower than average proportion said they would make the same academic choice if they had their education to do over again.

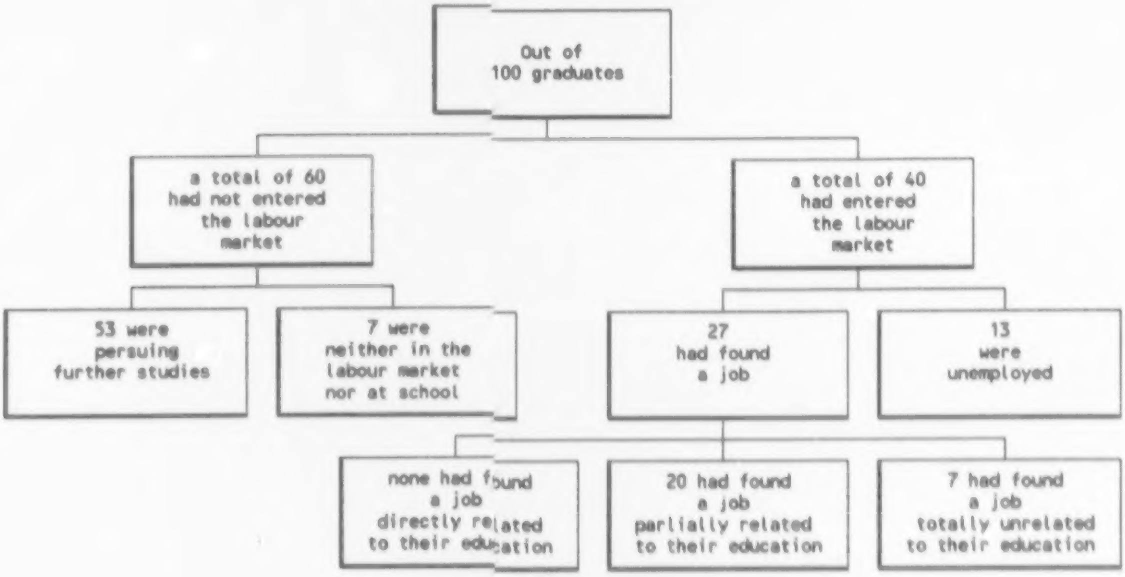
The 1990s is not likely to see a change in the situation that has obtained over the past number of years. Projections for the group of social sciences occupations indicate that the current surplus of labour is likely to persist throughout the period.

PSYCHOLOGY

BACHELOR'S DEGREE

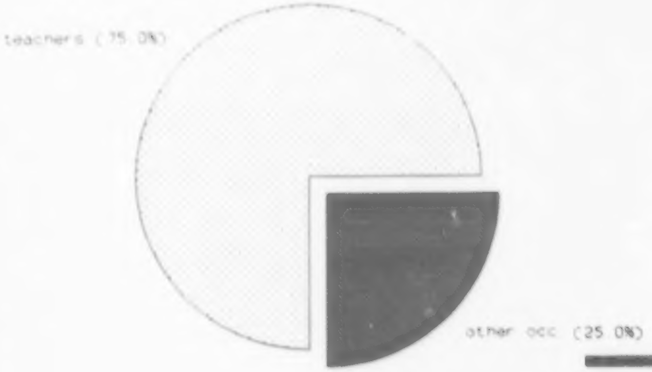
SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 60 had not entered the labour market
a total of 40 had entered the labour market
53 were persuing further studies
7 were neither in the labour market nor at school
27 had found a job
13 were unemployed
none had found a job directly related to their education
20 had found a job partially related to their education
7 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES

NUMBER OF GRADUATES



TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	745	3.4	3.9
1985/90	880	3.6	1.0
1990/95	900	3.5	2.0
1995/2000	925	3.6	2.0

SOCIAL SCIENCES

PSYCHOLOGY
BACHELOR'S DEGREE

This field of study encompasses the disciplines of behavioural psychology, child psychology, and other psychology specialties except educational psychology. The field also includes vocational counselling. Laval is the only university that offers a program in vocational counselling, whereas the other disciplines are offered in most Quebec universities. Advanced mathematics, biology and psychology courses are prerequisites.

Trends and projections

In the early 1980s, there were about 750 psychology graduates each year. The number started to rise in 1985, reaching 900 in 1989. The number of graduates is expected to remain at this last level during the 1990s.

Occupation after graduation

At the bachelor's level this discipline is characterized by a low participation rate two years after graduation. This situation can easily be explained by the fact that a master's degree is required for membership in the Quebec Association of Psychologists, which is necessary for practising this occupation in Quebec. A high unemployment rate and a weak link between education and work was recorded among those who chose to enter the labour market immediately.

Occupational profile

The occupational profile of the graduates who entered the labour market was dominated by teaching-related occupations. The most common related positions included vocational counsellor and university research assistant.

General picture

The occupation of psychologist is the preserve of graduates with a master's degree. Those who do not wish to pursue studies at the master's level generally find employment opportunities in teaching- related occupations. In this respect, graduates with an educational guidance degree enjoy the most opportunities in the labour market even if conditions appear difficult in terms of placement. These graduates expressed a high degree of satisfaction approaching that of graduates with bachelor's degrees taken as a whole, and more than two thirds said they were satisfied with their academic choice.

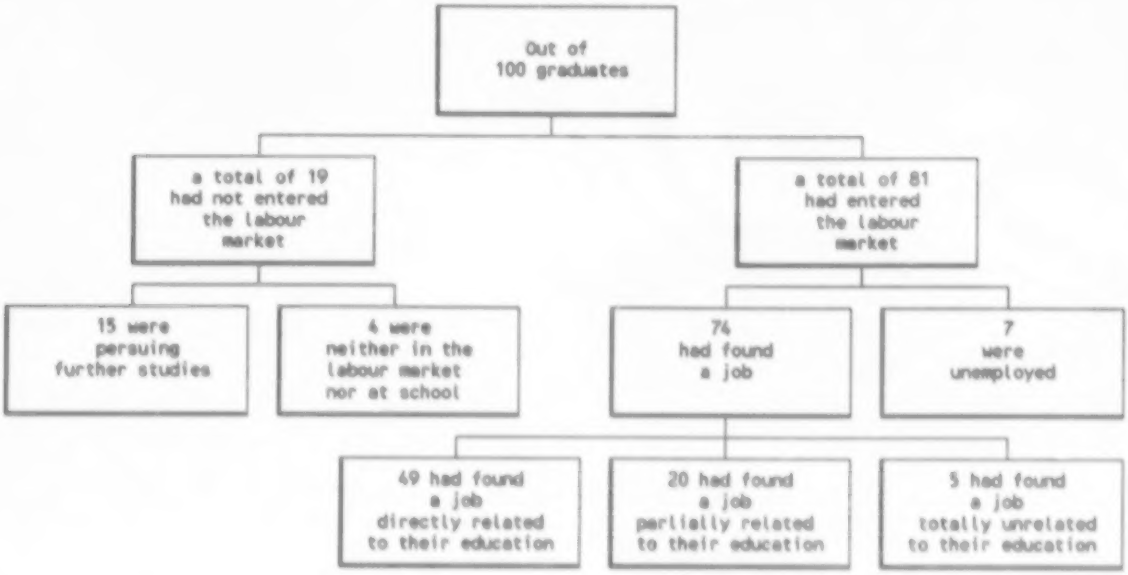
For those who do not wish to pursue studies at the master's level, teaching-related occupations continue to offer the best opportunities. In this respect, access to related occupations is expected to improve owing to the forecast increase in the demand for teachers of exceptional students. Graduates specializing in educational psychology are the most serious competitors for these positions. Also, an advanced knowledge of educational methods will be a major asset for taking full advantage of these improved market conditions.

PSYCHOLOGY

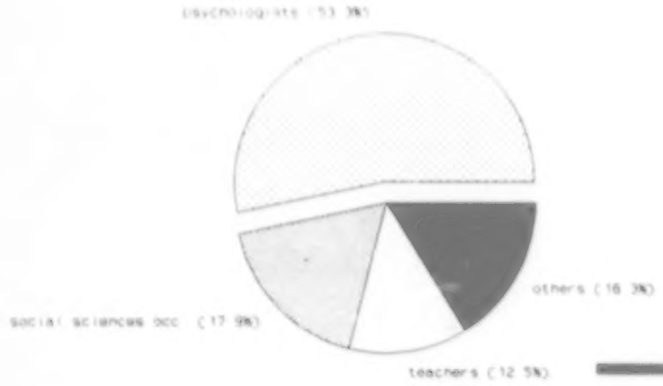
SOCIAL SCIENCES

MASTER'S DEGREE AND DOCTORATE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
15 were persuing further studies
4 were neither in the labour market nor at school
74 had found a job
7 were unemployed
49 had found a job directly related to their education
20 had found a job partially related to their education
5 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES
AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	300	7.2	1.5
1985/90	305	6.0	1.0
1990/95	280	6.0	1.0
1995/2000	260	6.0	1.3

PSYCHOLOGY
MASTER'S DEGREE AND DOCTORATE

Most Quebec universities offer graduate programs in psychology. In Quebec, certification as a clinical psychologist requires a master's degree.

Trends and projections

In terms of number of degrees granted, this field of study ranks second at the graduate level. The proportion dropped during the 1980s, however, from 8.4% in 1980 to 6.0% in 1989. If the current trend continues, the number of graduates will drop from 300 to 250 annually by the end of the decade.

Graduates' labour market participation

The labour market entry statistics for these graduates are almost the same as those for graduates with master's degrees or doctorates as a whole. Approximately 80% had entered the labour market two years after graduation. The unemployment rate was 8.5%, slightly above average. And 95% of jobs held were at least partly related to education.

Occupational profile

Nearly 55% of graduates employed two years after graduation were working as psychologists, according to the survey of graduates. More than 15% had found jobs in other social science occupational groups. As in the case of their colleagues with bachelor's degrees, teaching also offered a not inconsiderable number of openings, accounting for 10% of jobs found. The health care and social services sector was the biggest employer of these specialists: 26% of jobs were in the social services; 20%, in hospital services; and 10%, in private clinics.

Salary

Respondents in this discipline who were working full time when the survey was conducted had an average annual salary of $33,100.

General picture

Although the labour market situation facing these graduates was comparable with that facing other graduates at the same level, it was a distinctly better than the situation facing graduates with bachelor's degrees in psychology. In addition to allowing these graduates to practise the profession, their degrees gave them some advantage when applying for indirectly related jobs in the social sciences and teaching.

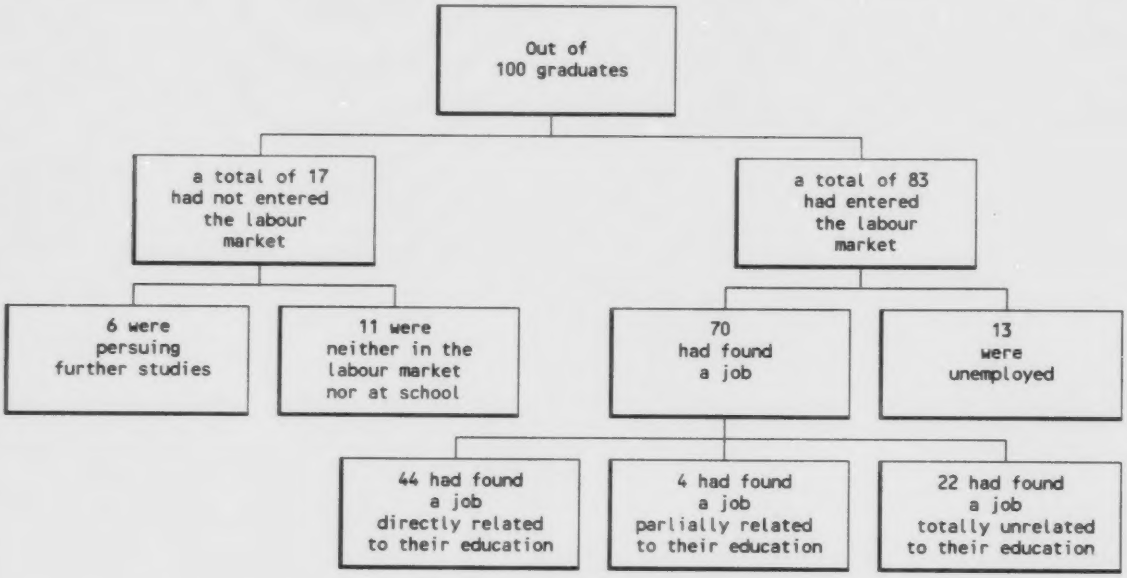
For the 1990s, the data indicate that demand for related occupations should remain constant and even rise slightly during the second half of the decade. Generally, prospects are expected to remain average throughout the period.

CIVIL PROTECTION

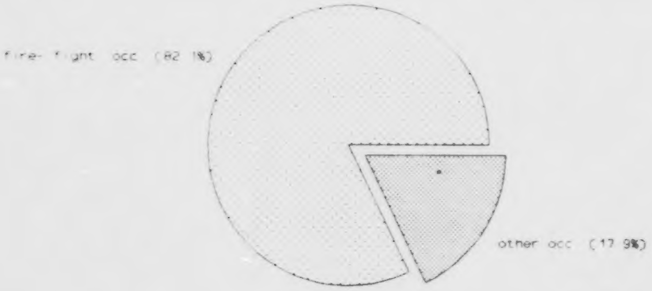
SECONDARY VOCATIONAL

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 17 had not entered the labour market
a total of 83 had entered the labour market
6 were persuing further studies
11 were neither in the labour market nor at school
70 had found a job
13 were unemployed
44 had found a job directly related to their education
4 had found a job parlially related to their education
22 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	70	0.3	---
1985/90	70	0.6	---
1990/95	70	0.7	---
1995/2000	70	0.7	---

CIVIL PROTECTION
SECONDARY VOCATIONAL

This field of study includes the disciplines of fire prevention and firefighting. Only one school commission (Chomedey-de-Laval) offered this program in 1990.

Trends and projections

The popularity of this field of training has been more consistent than that of other vocational disciplines at the secondary level in recent years.

Occupation after graduation

An above-average proportion of graduates entered the labour market immediately after graduation. The market could accommodate this high participation rate since almost all the 1987 graduates had found a job, with only one graduate unemployed one year after graduation. A high proportion of the jobs obtained were directly related to education and were at the same time permanent and full time.

Occupational profile

Most of the graduates were working as firefighters (80%). Municipalities were the main employers.

Salary

The average annual salary of $21,900 for these graduates was higher than the average of $13,600 for all the other disciplines at the secondary level.

General picture

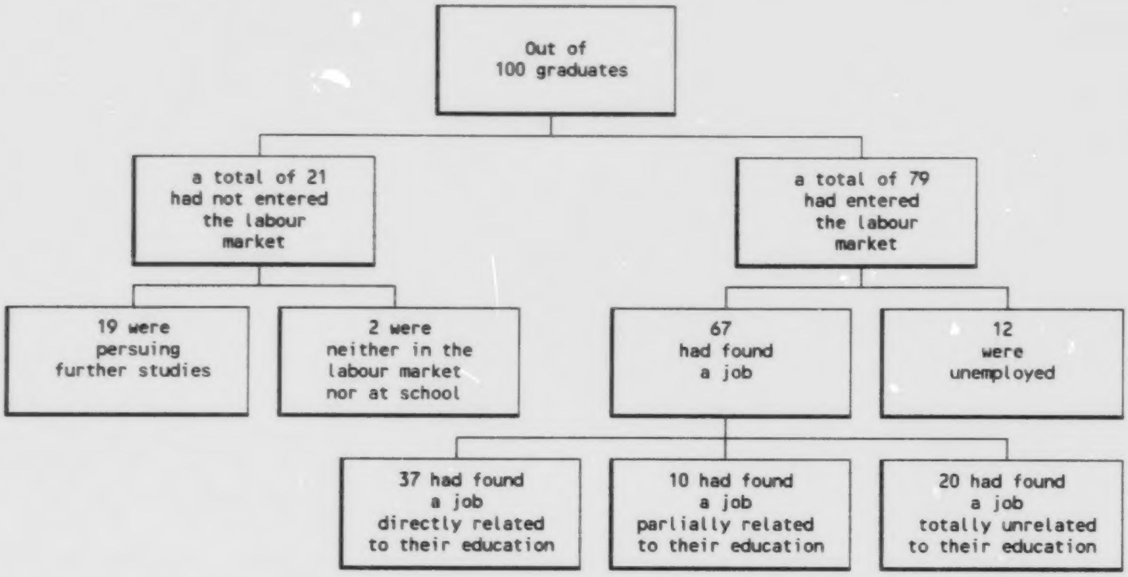
This training is a mandatory prerequisite to enter firefighting jobs in the various municipal fire departments in Quebec. Over the next few years, certain fire departments, including that of the City of Montreal, are expected to maintain high employment levels as in recent years. The placement outlook should therefore be among the most promising.

CORRECTIONAL AND PROTECTIVE SERVICES

SOCIAL SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 21
had not entered
the labour
market
a total of 79
had entered
the labour
market
19 were
persuing
further studies
2 were
neither in the
labour market
nor at school
67
had found
a job
12
were
unemployed
37 had found
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20 had found
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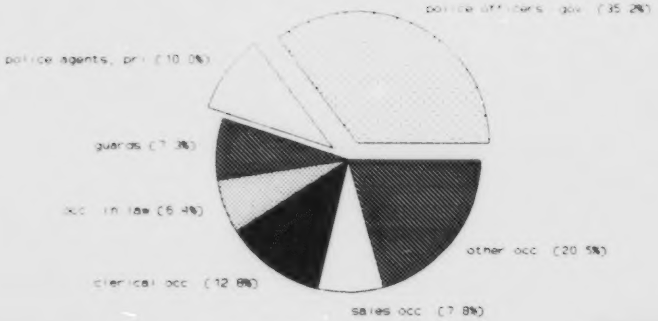
PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	515	3.5	0.7
1985/90	490	3.4	1.0
1990/95	445	3.5	1.5
1995/2000	460	3.5	1.4

CORRECTIONAL AND PROTECTIVE SERVICES

VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses specialties in police technology, correctional technology, legal technology and prevention technology. While training in police technology is available in all Quebec regions, other specialized disciplines are offered only by some institutions in the Quebec City and Montreal areas.

Trends and projections

After undergoing a rapid increase towards the end of the 1970s, the number of graduates in these disciplines subsequently grew at approximately the same rate as in all other disciplines in the vocational college sector. If it maintains its relative importance, this number is expected to decrease slightly during the 1990s, to attain an average of 440 to 460 graduates an[illegible]

Occupation after graduation

Police technology graduates must complete a practicum at the Nicolet Police Institute if they wish to join the ranks of a municipal or provincial police force. Although it is possible to be admitted to this school directly, candidates who have been already recruited by a police force are given priority. This situation largely explains the nature of the relation between education and work, which was either direct or non-existent for most of the graduates. A large number of graduates entered the labour market temporarily in the hope of being recruited in the following years. All the same, the placement rate for graduates who entered the labour market was high, reaching 85%.

Occupational profile

The occupational group composed of government police officers provided by far the most job openings for graduates, accounting for 35% of the jobs obtained. However, the private detective and security guard groups also provided labour market openings for police technology graduates, accounting for 10% and 5%, respectively, of the jobs obtained. For their part, graduates in other correctional services disciplines tended to enter primarily occupations in law such as bailiff, judicial officer, contract clerk and legal assistant as well as the social worker groups such as case-aides or half-way house supervisors. These various occupational categories accounted for about 10% of the jobs held by the graduates of correctional and protective services taken as a whole.

Salary

Overall, graduates who were working full time after completing their studies were earning an average annual salary of $20,600, a higher salary level than that of the average of vocational college graduates.

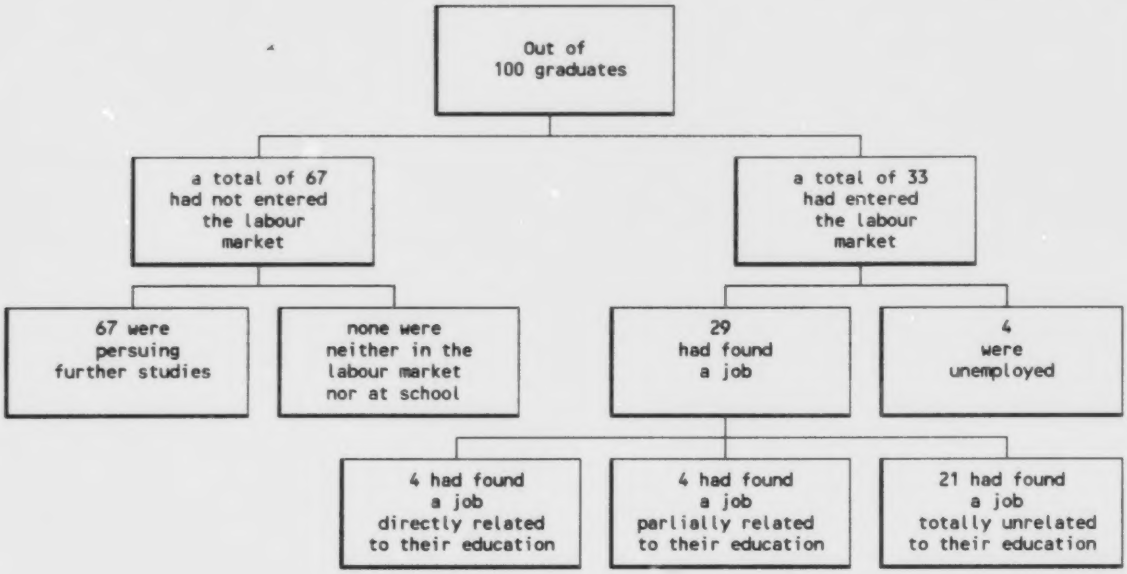
General picture

Data on placement in occupations related to this field of study tend to confirm that these graduates enter a more difficult than average labour market. Nonetheless, the situation appeared to improve over the past few years and it is expected that this trend will continue over the next decade when demand will grow more quickly than the number of graduates. Over the next decade, opportunities for entering the labour market should compare to the average.

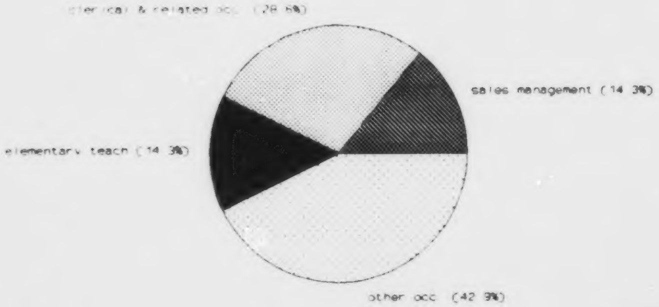
POLITICAL SCIENCE SOCIAL SCIENCES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 67 had not entered the labour market
a total of 33 had entered the labour market
67 were persuing further studies
none were neither in the labour market nor at school
29 had found a job
4 were unemployed
4 had found a job directly related to their education
4 had found a job parlially related to their education
21 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	460	2.1	0.3
1985/90	585	2.4	1.0
1990/95	600	2.3	1.0
1995/2000	600	2.3	0.9

SOCIAL SCIENCES

POLITICAL SCIENCE
BACHELOR'S DEGREE

Political science comprises, among other things, the specialized disciplines of comparative politics, international relations, political history and political philosophy. Programs in this discipline are offered at Bishop's, Concordia, Laval, McGill, Montréal, UQAC and UQAM. There is generally no prerequisite other than a Diploma of Collegial Studies.

Trends and projections

After a certain drop in popularity in the early 1980s, the proportion of graduates in this discipline to graduates with bachelor's degrees taken as a whole indicates a return to the level of popularity current in the late 1970s. If the trends of the last few years continue, some 600 persons should graduate in this field of study annually during the period 1990-2000.

Occupation after graduation

According to the 1988 survey of 1986 graduates, a proportion markedly higher than the average were still at school two years after obtaining their degrees. Among those who had decided to enter the labour market, 12% were unemployed, an unemployment rate higher than the 9.5% average for all graduates with bachelor's degrees. Moreover, there was almost no link between job and education for most of those who had found a job.

Occupational profile

The occupational profile of these graduates reflects the very weak link between job and education. The highest occupational concentration was in the administrative support staff category.

General picture

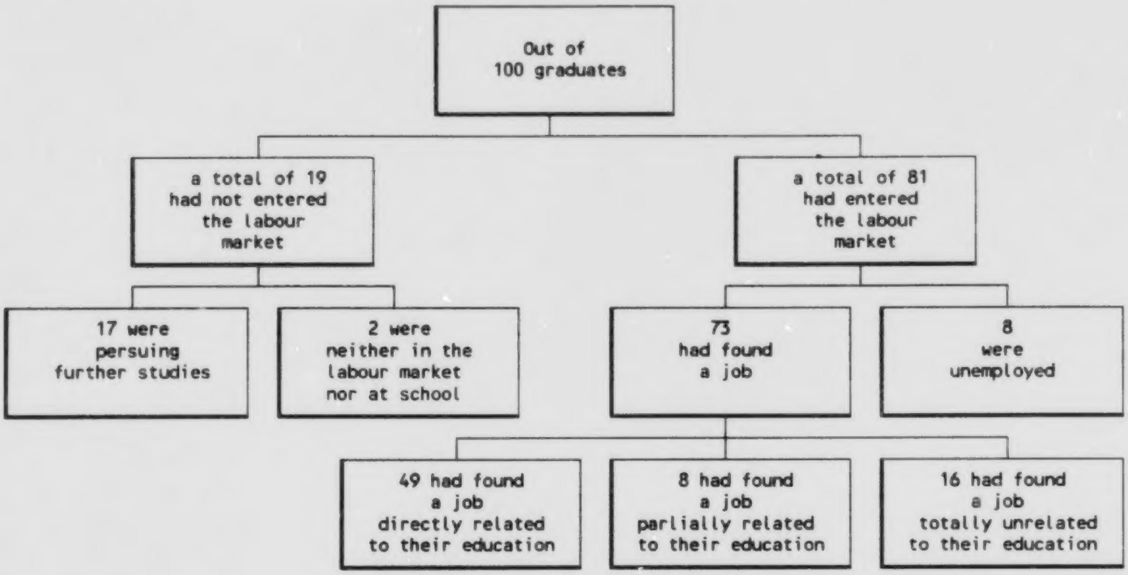
This high unemployment rate and the weak link between occupations pursued by graduates in this discipline and their education illustrate clearly the difficulties facing them in the labour market. Indeed it is one of the most difficult fields of study in labour market terms at the bachelor's level. It is revealing that barely 45% of these graduates said they would make the same choice, compared with nearly 70% for all graduates with bachelor's degrees.

During the 1990s, the prospects of employment growth in the hiring sectors (mainly the public sector) provide little hope that the labour market situation will improve significantly. On the contrary, projected requirements in related occupations point to a slight tightening of labour market entry conditions. These graduates will also have to continue to compete in the labour market against graduates in the social sciences such as sociologists and historians.

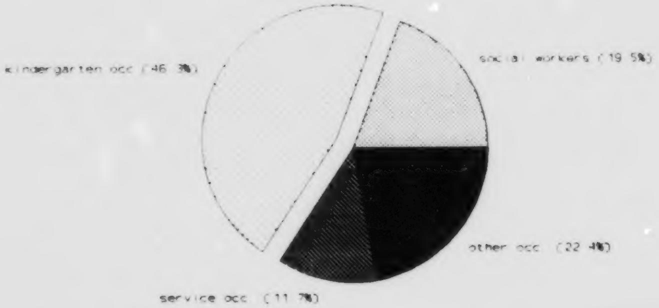
SOCIAL SERVICES — SOCIAL SCIENCES

VOCATIONAL COLLEGE DIPLOMA

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 19 had not entered the labour market
a total of 81 had entered the labour market
17 were persuing further studies
2 were neither in the labour market nor at school
73 had found a job
8 were unemployed
49 had found a job directly related to their education
8 had found a job parlially related to their education
16 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	540	3.7	0.8
1985/90	495	3.5	1.0
1990/95	440	3.5	1.3
1995/2000	455	3.5	1.3

SOCIAL SERVICES
VOCATIONAL COLLEGE DIPLOMA

This field of study encompasses daycare technology, psychosocial research and social work. These programs are available in most Quebec regions, except for psychosocial research technology which is offered at the Rimouski and Rosemont Cegeps and at Collège Mérici.

Trends and projections

During the 1980s, the growth in the number of graduates in these disciplines was the same as that in the vocational college sector taken as a whole. If this trend continues, an average of 450 students will graduate each year during the 1990s.

Occupation after graduation

More than 80% of these graduates, or a proportion comparable to the average, had entered the labour force after completing their studies. About 90% of them had found a job which for the most part was strongly related to their education.

Occupational profile

The jobs that were the most directly related to education were primarily in the category of daycare workers, which accounted for more than 45% of employed graduates. Among the social work technology graduates, the most common related occupational groups were those of social and community workers.

Salary

According to the Relance Survey, the average annual salary of respondents who were working full time one year after graduation was $13,000. This salary level was 25% lower than that of other graduates in the vocational college sector.

General picture

Whereas social work technology graduates were somewhat affected by budget cuts at the various levels of government, daycare workers benefited from the progressive expansion of the daycare network. Overall, the employment outlook for all of these graduates has therefore improved, while remaining more or less comparable to the average.

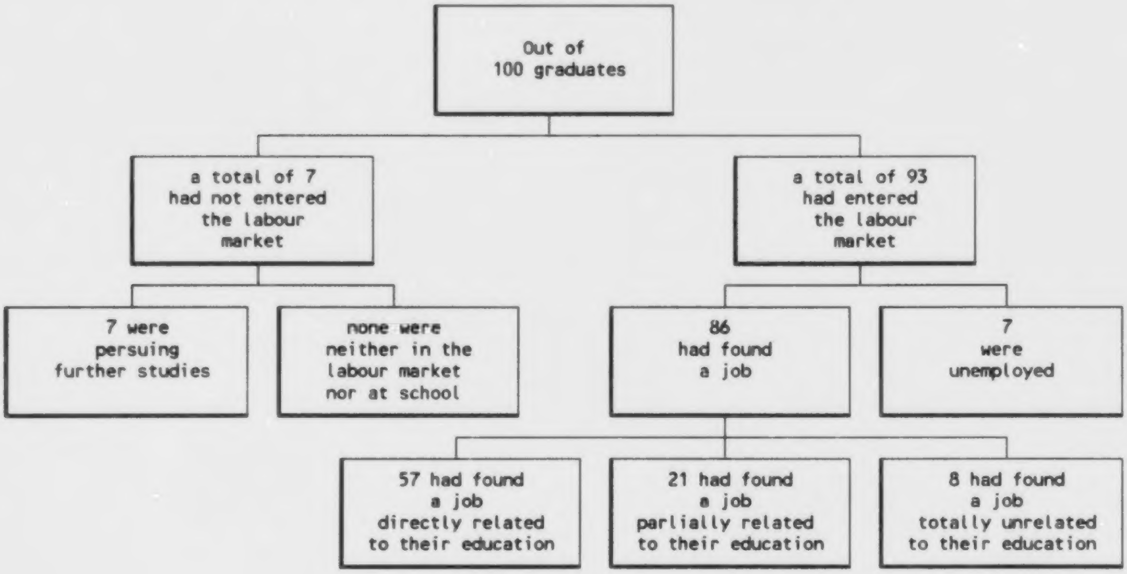
These trends should continue over the 1990s, which will be marked by a notable improvement in market entry opportunities for graduates in daycare technology. The outlook for other social services workers will remain uncertain and will largely depend on the governments' budget priorities.

SOCIAL SERVICES

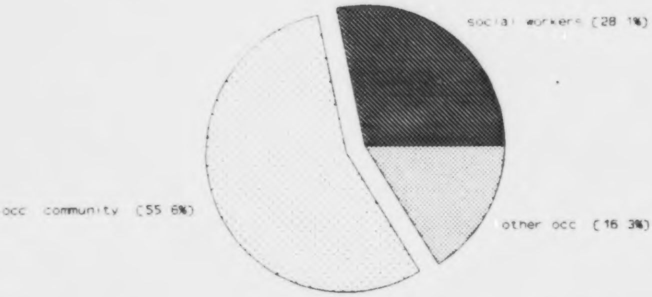
SOCIAL SCIENCES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 7 had not entered the labour market
a total of 93 had entered the labour market
7 were persuing further studies
none were neither in the labour market nor at school
86 had found a job
7 were unemployed
57 had found a job directly related to their education
21 had found a job parlially related to their education
8 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	435	2.0	1.7
1985/90	480	1.9	1.0
1990/95	500	2.0	1.0
1995/2000	500	1.9	1.0

SOCIAL SCIENCES

SOCIAL SERVICES
BACHELOR'S DEGREE

Most Quebec universities offer programs in social services or social work. Prerequisites vary depending on university. Courses in statistics, biology and psychology may be required in addition to a Diploma of Collegial Studies.

Trends and projections

The popularity of this discipline has remained constant over the past number of years, while the number of graduates has been maintained at approximately 2% of all graduates with bachelor's degrees. If this percentage remains constant during the 1990s, an average of nearly 500 students will graduate in these disciplines from Quebec institutions annually.

Occupation after graduation

According to the 1988 survey of 1986 graduates, graduates in this discipline showed one of the highest participation rates at the bachelor's level. A placement rate of 92% of graduates in the labour market was also well above the average. Finally, in the opinion of these graduates, more than 90% of their jobs were partially, and more often directly, related to their education.

Occupational profile

The occupational profile of graduates in this field of study was dominated by the occupational group of social workers (28%) and staff in social and community services (56%).

Salary

The average annual salary of survey respondents working full time was $26,500, comparable to the average of graduates with bachelor's degrees taken as a whole.

General picture

Even if indications are that labour market job entry conditions for these graduates declined somewhat in the period 1985-1990 compared with the first half of the 1980s, the recent statistics presented above show clearly that these graduates were facing a labour market appreciably more favourable than for the average graduate with a bachelor's degree. Despite this favourable labour market situation, a lower than average proportion said they would make the same academic choice.

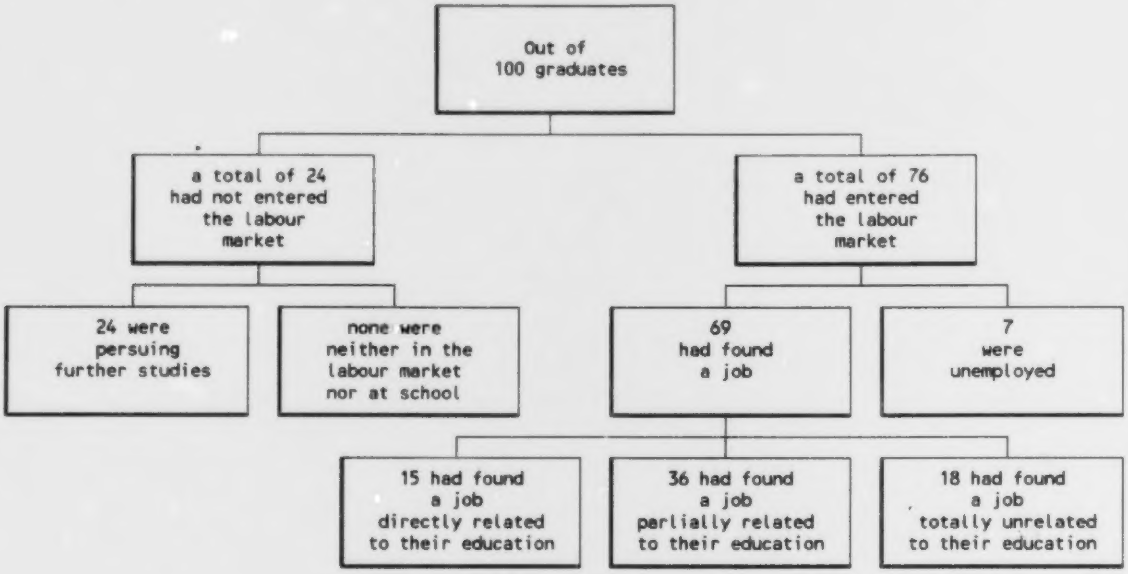
During the coming decade, these graduates should continue to enjoy more or less favourable conditions, since requirements are expected to remain high. We anticipate job entry opportunities comparable to those prevailing over the past few years, while demand will exceed the supply of specialized human resources throughout the 1990s.

SOCIOLOGY

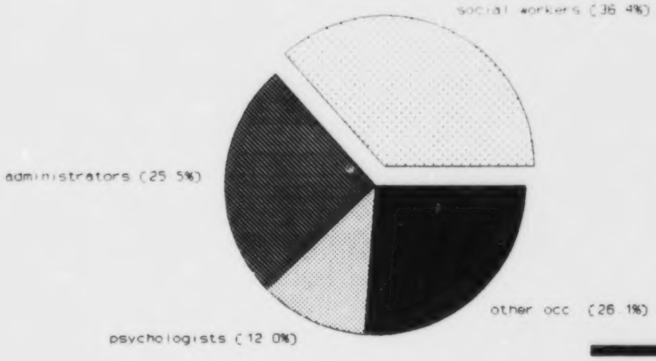
SOCIAL SCIENCES

BACHELOR'S DEGREE

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of 100 graduates
a total of 24 had not entered the labour market
a total of 76 had entered the labour market
24 were persuing further studies
none were neither in the labour market nor at school
69 had found a job
7 were unemployed
15 had found a job directly related to their education
36 had found a job parlially related to their education
18 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	325	1.5	1.1
1985/90	370	1.5	1.0
1990/95	375	1.5	1.0
1995/2000	400	1.5	1.1

SOCIOLOGY
BACHELOR'S DEGREE

This field of study includes programs in criminology and sociology. A program in criminology is offered at the University of Montréal, while most Quebec universities offer programs in sociology. Mathematics courses are required for admission to criminology. There is no prerequisite for sociology except a Diploma of Collegial Studies or equivalent.

Trends and projections

The popularity of this discipline declined steadily from the late 1970s to the mid-1980s. Since then, the number of graduates has risen slightly to 370 annually. If this proportion remains constant, the number of graduates during the 1990s will be maintained at nearly 400 annually on average.

Occupation after graduation

The participation rate of graduates in these disciplines two years after graduation was comparable to the rate for graduates with bachelor's degrees taken as a whole; the proportion of those who had found jobs was also comparable. The link between job and education was not as close, however. Only 20% of 1986 graduates who were working in 1988 held jobs directly related to their education, compared with 55% for all graduates with bachelor's degrees. Conversely, 25% were working in an unrelated field over against 13% of all graduates.

Occupational profile

Among those with a job two years after graduation, nearly 50% held positions classified in the major group of social sciences occupations. Specifically, social workers accounted for a little more than 35% of jobs. With more than 25% of positions, the group of administrators also accounted for a significant number of jobs.

Salary

The average annual salary of graduates working full time two years after graduation was $25,600. This salary level put these graduates slightly below the average for all graduates with bachelor's degrees, this being $26,600 annually.

General picture

The low rate of placement in occupations related to education did not seem to translate into a greater desire to continue one's education or higher than average difficulty in entering the labour market. Moreover, a higher percentage of these graduates said they would make the same academic choice if they could start their education over again.

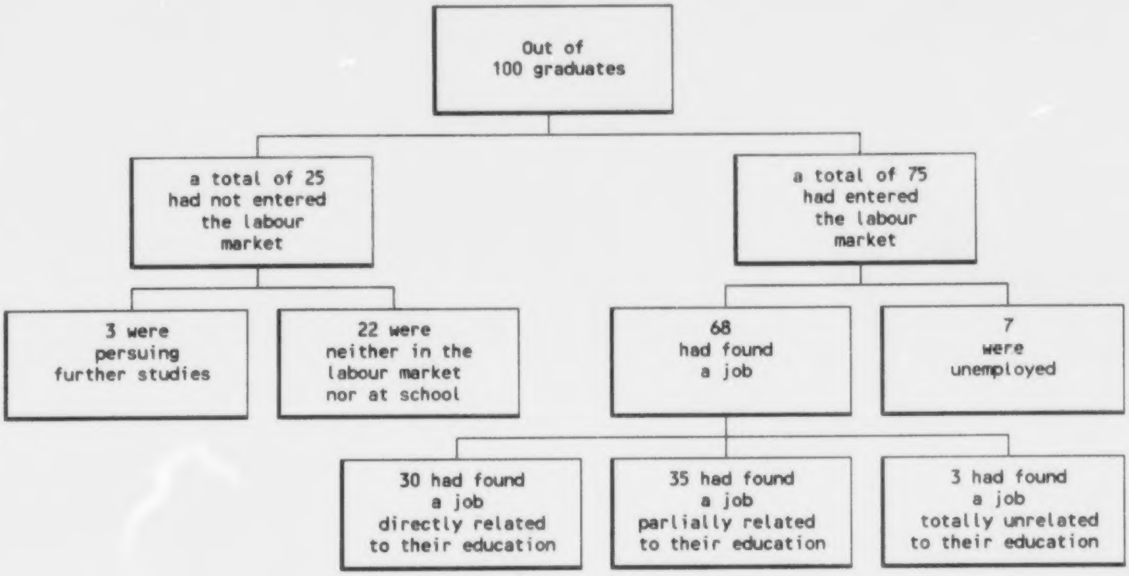
As in the last decade, the chances of finding a job in a related occupation are not expected to improve significantly. These are occupations in which the public and parapublic sectors provide most jobs and thus are especially sensitive to government budget decisions.

SOCIOLOGY

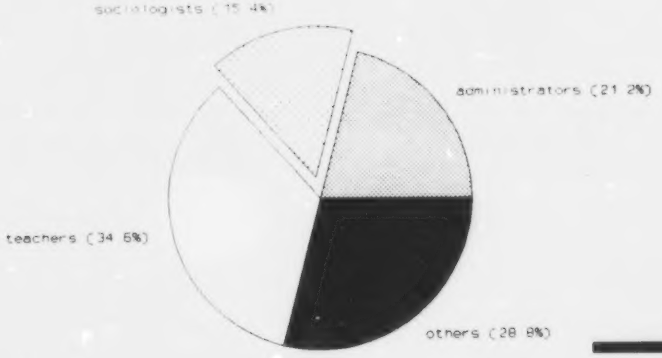
MASTER'S DEGREE AND DOCTORATE

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES two years after graduation


Out of 100 graduates
a total of 25 had not entered the labour market
a total of 75 had entered the labour market
3 were persuing further studies
22 were neither in the labour market nor at school
68 had found a job
7 were unemployed
30 had found a job directly related to their education
35 had found a job parlially related to their education
3 had found a job totally unrelated to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	80	1.9	1.7
1985/90	105	2.1	1.0
1990/95	100	2.1	0.8
1995/2000	90	2.1	0.9

SOCIOLOGY
MASTER'S DEGREE AND DOCTORATE

Concordia, Laval, McGill, Montréal and the University of Quebec at Montreal offer graduate programs in sociology. Criminology programs are also available at the University of Montreal.

Trends and projections

After a drop in the late 1970s and early 1980s, the relative number of graduates with master's degrees or doctorates in sociology bounced back in mid-decade to its level of 2% beginning in 1986. If this proportion holds, approximately 90 to 100 students will earn graduate degrees in sociology each year during the coming decade.

Graduates' labour market participation

According to the survey of graduates, proportionately more graduates in this field of study decided to pursue further studies than graduates in other fields. The unemployment rate of those who had decided to enter the labour market was slightly above average: 8% compared with 6%. The major difference in terms of placement was that these graduates held jobs they considered to be less directly related to their education.

Occupational profile

Since these graduates hold jobs less directly related to their education, their occupational profile was also more varied. A point to note is that barely 15% of graduates were working in the social sciences, compared with 40% of graduates with bachelor's degrees. Teaching accounted for 35% of graduates, while management accounted for 22%.

Salary

The average annual salary of survey respondents working full time was $40,000.

General picture

During the 1980s, labour market entry opportunities declined as the number of graduates increased and the demand in directly related occupations dropped. Graduates were able to compensate for the worsening situation by broadening their occupational range, which meant a weaker link between work and education.

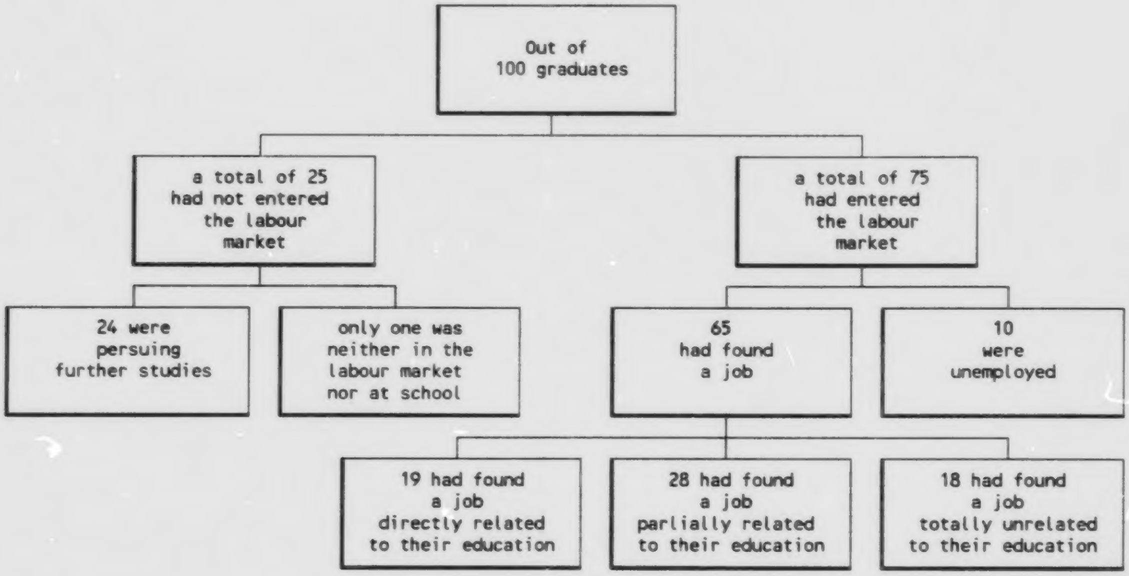
During the coming years, prospects should continue to decline, falling below average, as a result of the anticipated drop in demand. The jobs most directly related to education are expected to bear the brunt of the expected slow employment growth rate in the public and parapublic sectors, where they are concentrated.

SPORT AND RECREATIONAL TECHNOLOGY

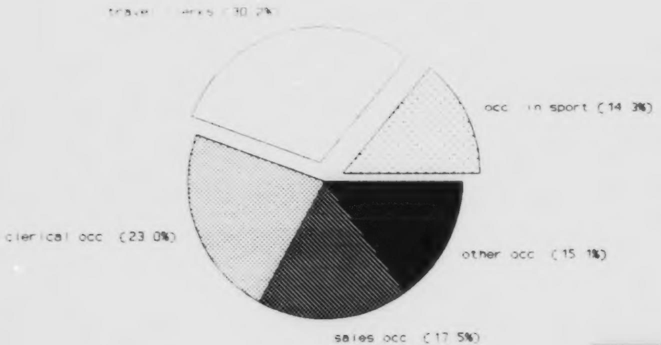
VOCATIONAL COLLEGE DIPLOMA

SOCIAL SCIENCES

LABOUR MARKET PARTICIPATION OF GRADUATES
two years after graduation


Out of
100 graduates
a total of 25
had not entered
the labour
market
a total of 75
had entered
the labour
market
24 were
persuing
further studies
only one was
neither in the
labour market
nor at school
65
had found
a job
10
were
unemployed
19 had found
a job
directly related
to their education
28 had found
a job
parlially related
to their education
18 had found
a job
totally unrelated
to their education

PRINCIPAL OCCUPATIONS OF GRADUATES



NUMBER OF GRADUATES

TRENDS IN NUMBER OF GRADUATES AND MARKET OUTLOOK

YEAR	NUMBER OF GRADUATES	% OF TOTAL NUMBER OF GRADUATES WITH THAT DEGREE	MARKET TREND INDICATOR 1985/90=1
1980/85	265	1.8	0.9
1985/90	270	1.9	1.0
1990/95	255	2.0	1.6
1995/2000	265	2.0	1.6

SOCIAL SCIENCES

SPORT AND RECREATIONAL TECHNOLOGY

VOCATIONAL COLLEGE DIPLOMA

While five Quebec regions out of twelve offer courses specializing in tourism (Lower St. Lawrence, Estrie, Montérégie, Montreal and Quebec City), recreational technology is available in only two regions (Lower St. Lawrence and Montreal).

Trends and projections

During the last decade the number of graduates in these disciplines remained more or less constant around an average of 265 annually. Given the growth in the college population, this number should fall only slightly if it maintains its current relative popularity.

Occupation after graduation

The results of the 1988 Relance Survey showed that these graduates had a higher than average unemployment rate of 13.3%. According to the respondents, the relation between education and work was weaker than average and more often than not indirect. This situation partly explains why a higher than average proportion of graduates opted to continue their studies after graduation.

Occupational profile

Of the occupational groups that are the most closely linked to education and which opened the door to the labour market for these graduates, that of travel agents offered the most opportunities, accounting for 30% of the jobs obtained. For their part, occupations in sports, especially that of coach, accounted for nearly 15% of the positions held. A large proportion of these graduates entered the labour market in occupations less directly related to their education, such as receptionist. Most of the other graduates held positions related to office work or sales.

Salary

The average salary of respondents to the survey who were working full time after graduation was $13,800 annually, a lower salary level than the average for vocational college graduates.

General picture

The main placement, unemployment and salary indicators show that graduates in these disciplines face slightly fewer than average market opportunities. A certain amount of competition from university graduates in physical education and in leisure and recreation also exists for the positions of coach, trainer and instructor in sports and recreation. Graduates in tourism, however, benefited to a greater extent from the development of the tourist infrastructure in the different regions and the proliferation of travel agencies over the last few years. In this respect, the market outlook for tourism graduates have proved more favourable.

An aging population, the growing number of double income households and more flexible work hours that accompany the development of activity services as well as specialized services aimed at target clienteles are factors that will continue to favour the growth of the tourist and recreational infrastructures. It is expected that the need for specialized personnel in this sector will grow more quickly than the number of graduates. The employment outlook for these graduates will thus improve gradually over the next decade.

APPENDIX I

COMPOSITION OF FIELDS OF STUDY
ARTS

FINE ARTS (community college) 16

Plastic arts
Professional music
Popular music
Professional theatre
Acting
Design
Scenic design
Dance and ballet
Ceramics

MUSIC (undergraduate) 18

Music (except teaching)

OTHER PERFORMING ARTS AND FINE ARTS (undergraduate) 20

Art studies (general)
Art appreciation and aesthetics
Fine arts
Painting
Sculpture
Dance
Dramatic arts, theatre

HAIRDRESSING (secondary) 22

Women's hairdressing
Men's hairdressing

ESTHETICS (secondary) 24

Beauty care assistant
Esthetics
Hair removal by electrical means

SEWING AND APPAREL (secondary) 26

Clothing manufacture
Leather making
Garment making, sales and styling
Fashion and clothing
Pattern-making
Fashion design

INTERIOR ARRANGEMENT (secondary) 28

Interior arrangement
Displaying
Interior arrangement displaying

CREATIVE AND DESIGN ARTS (community college) 30

Interior design
Fashion design
Fashion production
Men's clothing technology
Women's clothing technology

PRINTING AND ADVERTISING (secondary) 32

Manual platen press and duplicator
Bookbinding
Independent shop printing
Photocomposition
Photolithography
Offset printing
Commercial drafting

PHOTOGRAPHY (secondary) 34

Photography

COMMERCIAL AND ADVERTISING ARTS (community college) 36

Window display
Industrial design technology
Fashion merchandising

GRAPHIC AND AUDIO-VISUAL ARTS (community college) 38

Photography
Graphics
Typography
Photocomposition
Photolithography
Printing
Bookbinding (finishing)
Photomechanics, photography

APPLIED ARTS (undergraduate) 40

Industrial design
Graphic arts
Drafting and design
Engraving
Photography
Lithography
Typography
Ceramics
Jewellery
Fashion design
Interior decorating

APPENDIX II

COMPOSITION OF FIELDS OF STUDY
EDUCATION

TEACHER TRAINING ELEMENTARY/SECONDARY (undergraduate) 44

Teaching, fine arts
Teaching, commerce
Special education
Teaching, home economics
Teaching, industrial sciences and arts
Music instruction
Sex education
Teaching, hygiene
Religious education
Adult education

TEACHER TRAINING (graduate) 48

Teaching, arts and fine arts
Teaching, commerce
Special education
Teaching, home economics
Teaching, industrial sciences and arts
Music instruction
Sex education
Teaching, hygiene
Religious education
Adult education
Higher education
Teacher training, postsecondary
Teacher training, preschool
School libraries
Educational administration
Educational psychology
Educational counselling
Program development
Test evaluation
Educational technology
Comparative education
Sociology of education
Other education specialties

TEACHER TRAINING, OTHER (undergraduate) 44

Higher education
Teacher training, postsecondary
Teacher training, preschool

NON-TEACHING EDUCATION (undergraduate) 50

School libraries
Educational administration
Educational psychology
Educational counselling
Program development
Test evaluation
Educational technology
Comparative education
Sociology of education
Other education specialities

PHYSICAL EDUCATION (undergraduate) 52

Physical education
Kinesiology
Human kinetics
Anthropokinetics
Recreation
Recreology

EDUCATIONAL AND COUNSELLING SERVICES (community college) 54

Special care counselling

APPENDIX III

COMPOSITION OF FIELDS OF STUDY
COMMERCE, MANAGEMENT AND ADMINISTRATION

COMMERCE (secondary) 58

Auto parts clerk
Sales and distribution of cosmetics
Auxiliary clerk
Professional sales
Merchandising clerk
Accounting clerk
Office clerk
Receptionist/telephone operator
Taxation clerk
Sales clerk
Office clerk

SECRETARIAL ARTS (community college) 62

Secretarial science
Office technology
Medical archives

FINANCIAL MANAGEMENT (community college) 68

Accounting
Finance

OTHER MANAGEMENT SERVICES (community college) 72

Farm management
Farm operation
Farm management and operation
Agricultural management consulting
Personnel
Industrial management
Transportation
Office management

TABLE SERVICE (secondary) 60

Table service

BUSINESS TECHNOLOGIES (secondary) 62

General secretary
Legal secretary
Medical secretary
Stenographer-typist
Secretary
Keypunch operator
Computer operator

BUSINESS ADMINISTRATION (community college) 66

Administration technology
General administration
Administration and cooperation

INSTITUTIONAL MANAGEMENT (community college) 70

Hotel business
Food production and administration

MARKETING (community college) 74

Marketing

COMMERCE AND MANAGEMENT (undergraduate, graduate) 76

Accounting
Finance
Industrial relations
Marketing
Personnel management
Public administration
Health administration
Administration, hotel and food services
Other, special administration

APPENDIX IV

COMPOSITION OF FIELDS OF STUDY
HUMANITIES

ENGLISH (undergraduate) 82

Creative writing

LINGUISTICS, TRANSLATION, INTERPRETATION (undergraduate) 86

Linguistics
Interpretation
Translation

DOCUMENTATION TECHNOLOGY (community college) 90

Documentation technology

LIBRARY SCIENCE 92 (graduate)

Library science
Medical library science
Maintenance of archives
Museology
Administration, art galleries
Museum sciences
Other documentation sciences

HISTORY (undergraduate, graduate) 100

Regional history
Ancient history
Medieval history
Modern history
Other

FRENCH (undergraduate) 84

Creative writing

LANGUAGES AND LITERATURE (graduate) 88
Linguistics
Interpretation
Translation
Classical Studies
Hebrew
Latin
Other languages and literatures
Comparative literature
Medieval languages
Asian languages and/or literature
Slavic languages and/or literature
Other languages and literatures

MASS COMMUNICATIONS (community college) 94

Media arts and technology

MASS COMMUNICATIONS (undergraduate) 96

Filmmaking
Film
Radio and television
Public relations
Journalism

PHILOSOPHY AND RELIGION (undergraduate, graduate) 102
Ancient philosophy
Epistemology
Ethics
History of philosophy
Logic
Comparative religion
Canon law (does not include religious teaching)
Pastoral theology
Practical theology

APPENDIX V

COMPOSITION OF FIELDS OF STUDY HEALTH AND MEDICINE

DENTISTRY (undergraduate) 108

Dentistry
Oral biology
Oral surgery
Orthodontics
Other specialties in dentistry

MEDICINE (doctorate) 110

Medicine

BASIC SCIENCES IN MEDICINE (undergraduate) 112

Anatomy
Biochemistry
Biophysics
Embryology
Endocrinology
Genetics
Histology
Neurophysiology
Pharmacology
Physiology
Other basic sciences in medicine

PHARMACY (undergraduate) 114

Medical pharmacy
Pharmaceutics
Pharmaceutical chemistry
Pharmaceutical therapy
Pharmacognosy
Radiopharmacy, nuclear biology
Clinical pharmacy
Hospital pharmacy
Other specialties in pharmacy (except pharmacology)

THERAPY (undergraduate) 116

Occupational therapy
Physiotherapy
Other therapy

OTHER HEALTH SCIENCES (undergraduate) 118

Bacteriology
Parasitology
Immunology
Pathology
Other paraclinical sciences
Optometry
Hygiene and community medicine
Health, hygiene and environment
Public health
Preventive medicine
Public health and veterinary sciences
Other, epidemiology and public health
Audiology and speech therapy
Medical laboratory sciences and technology
Radiotechnology
Other, medical laboratory science and technology
Art and medicine
Dental hygiene
Other health related occupations

HEALTH SCIENCES
(graduate) 120

Basic sciences in medicine
Therapy
Specialty in medical surgery

HEALTH SERVICES
(secondary) 122

Nursing assistant
Dental assistant

NURSING SCIENCES
(community college) 124

Nursing
Nursing care

NURSING
(undergraduate) 126

Invalid care
Geriatrics nursing
Nursing:
    Medical-surgical
    Obstetrics
    Remote regions
    Paediatrics
    Psychiatry
    Mental health
    Public health

MEDICAL LABORATORY TECHNOLOGY
(community college) 128

Medical laboratory technology

RADIOLOGY TECHNOLOGY
(community college) 130

Diagnostic radiology
Nuclear medicine technology
Radiotherapy

DENTAL ASSISTANT TECHNOLOGY
(community college) 132

Dental technology
Dental hygiene

OTHER DIAGNOSTIC AND TREATMENT TECHNOLOGIES
(community college) 134

Medical technology
Respiratory technology
Rehabilitation technology

MEDICAL EQUIPMENT TECHNOLOGY
(community college) 136

Denturology
Ortheses and prostheses
Visual ortheses
Hearing prostheses

OTHER HEALTH TECHNOLOGIES
(community college) 138

Dietetics
Cytotechnology
Electrophysiology technology
Public health

APPENDIX VI

COMPOSITION OF FIELDS OF STUDY
APPLIED SCIENCES

CARPENTRY (secondary) 142

Carpentry (construction)
Woodworking (construction)

WOODWORKING (secondary) 146

Shop carpenter
Prefabrication carpenter
Layout carpenter

CIVIL ENGINEERING TECHNOLOGY (community college) 150

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General drafting
Mechanical drafting
Architectural and structural drafting
Surveying operator (topography)
Building equipment drafting

ARCHITECTURAL AND BUILDING TECHNOLOGY (community college) 160

Building and public works technology
Building mechanical systems
Construction cost estimation and realty appraisal technologies
Marine technology - naval architecture
Welding

ELECTRICITY (secondary) 144

Construction electrician
Industrial wiring maintenance electrician
Electrical drafting estimator
Assembly of wiring installations

PLUMBING AND HEATING (secondary) 148

Plumbing and heating helper
Pipefitter
Plumbing and heating mechanic
Installers and mechanics of air-conditioning and refrigeration units
Refrigeration worker

CIVIL ENGINEERING (undergraduate, graduate) 152

Civil engineering

ARCHITECTURAL DRAFTING TECHNOLOGY (community college) 158

Architectural technology

ARCHITECTURE (undergraduate) 162

Architecture (except regional and urban planning)

OFFICE MACHINE ELECTRONICS (secondary) 164

Electrotechnical appliances
    servicing
Electronic home appliances
    servicing
Installation/repairs of
    telecommunications
    equipment
Home appliances electro-
    mechanics
Vending machines
    electromechanics
Telecommunications operator
Installation electrician
Security systems
    electromechanics
Office machine mechanics
Office machine electromechanics

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Electrical engineering

AUTOMATED SYSTEMS ELECTROMECHANICS (secondary) 166

Automated systems
    electromechanics
Systems electromechanics

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Electrotechnology
Electronics
Electrodynamics
Audio-visual equipment
Avionics

INSTRUMENTATION (community college) 170

Instrumentation and control

HEAVY EQUIPMENT (secondary) 176

Heavy equipment

FARM MACHINERY MECHANICS (secondary) 178

Farm machinery mechanics
Farm machinery maintenance
Farm machinery repairs

AUTOBODY WORK (secondary) 182

Bodywork
Repainting
Autobody work

MECHANICAL ENGINEERING (community college) 186

Agricultural hydraulics
Mechanical technology
Motorized equipment
Mechanical engineering technology
Marine mechanics

FURNITURE-MAKING (secondary) 190

Mass production of furniture
Molds and templates
Woodworking
Furniture and templates
Reinforced plastic stratifier/modelmaker
Modelmaker
Furniture finishing
Upholsterer
Handcrafted upholstery
Industrial upholstery

AUTOMOBILE MECHANICS (secondary) 180

Automobile mechanics
Light vehicle maintenance
Light vehicle mechanics
Recreational vehicles, maintenance and equipment
Commercial vehicle mechanics
Diesel mechanics
Marine mechanics
Fishing boat mechanics

MAINTENANCE MECHANICS (secondary) 184

General and mechanical maintenance worker
Maintenance mechanic

MECHANICAL ENGINEERING (undergraduate) 188

Mechanical engineering

MACHINIST (secondary) 192

Grinding and sharpening of tools
General machinist
Lathe operator
General machinist
Numerically-controlled machine operator
Precision mechanics
Reinforced plastic stratifier-finisher
Plastic molding machine set-up operator
Toolmaker
Diemaker
Tool/diemaker

METALLURGY (secondary) 194

Arc and gas welder
Welder
General welder
Welder-fitter
Metal construction mechanic
Sheet metal worker
Sheet metal mechanic

PRIMARY INDUSTRIES (community college) 198

Management technology
Game and fish management
Development and management of marine resources
Applied geology
Development
Mineralogy

INDUSTRIAL ENGINEERING (community college) 202

Plastics processing technology
Mechanical manufacturing technology
Production and control
Metallurgical technology
Quality control
Metallurgical processes
Manufacturing technology

INDUSTRIAL WORK (secondary) 196

Fish processing plant worker
Electrotechnical production line assembler
Stationary machine mechanic (steam)
Production machine operator
Papermill worker

RESOURCE PROCESSING TECHNOLOGIES (community college) 200

Food technology: quality control
Dairy technology
Food technology: production
Forest products processing
Marine products processing
Paper technology
Mineral technology

CHEMICAL ENGINEERING (undergraduate) 204

Chemical engineering

FORESTRY (secondary) 206

Woods worker
Forest ranger
Wildlife conservation officer
Grader-scaler
Sawyer-grader

FOREST TECHNOLOGY (community college) 208

Forest technology
Forest management
Forest development

TRANSPORTATION TECHNOLOGY (community college) 212

Navigation
Piloting
Aircraft maintenance
Air traffic control

ENGINEERING, OTHER (undergraduate) 216

Aeronautic and aerospace engineering
Systems engineering
Industrial engineering
Mining engineering
Metallurgical engineering
Biomedical engineering
Environmental engineering
Geological engineering
Geophysical engineering
Ocean engineering
Petroleum engineering
Rural engineering
Surveying
Physical engineering
General engineering

FORESTRY (undergraduate) 210

Dendrology
Forest ecology
Reforestation
Forest protection
Forest wildlife conservation
Silviculture
Forestry science and technologies
Forest engineering
Other, forestry
Landscape architecture

OTHER ENGINEERING TECHNOLOGIES (community college) 214

Agricultural machinery
Cartography
Geodesy
Mechanical engineering technology - design
Maintenance analysis technology
Physical technology
Industrial safety and sanitation

ENGINEERING, OTHER (graduate) 218

Aeronautic and aerospace engineering
Systems engineering
Industrial engineering
Mining engineering
Metallurgical engineering
Biomedical engineering
Environmental engineering
Geological engineering
Geophysical engineering
Ocean engineering
Petroleum engineering
Rural engineering
Surveying
Physical engineering
General engineering
Chemical engineering
Mechanical engineering

APPENDIX VII

COMPOSITION OF FIELDS OF STUDY BIOLOGICAL SCIENCES

BIOLOGY (undergraduate, graduate) 222

Genetics
Other specialties in biology
    (except botany, zoology, biophysics, medicine)

BAKING (secondary) 230

Pastry

AGRICULTURE (secondary) 234

Farm worker
Ornamental horticulture
Horticultural caretaking
Horticulture
Vegetable production
Animal production
Dairy production

MEAT CUTTING (secondary) 226

Meat cutting

PROFESSIONAL COOKING (secondary) 228

Professional cooking

FOOD SCIENCES (undergraduate) 232

Food and nutrition
Consumer studies
Family studies

AGRICULTURAL TECHNOLOGIES (community college) 236

Natural sciences
Teaching and research
    laboratory
Animal health
Zootechnology
Market gardening
Ornamental horticulture
Phytotechnology
Soil technology
Equestrian technology
Farm management
Thanatology

ANIMAL SCIENCE AND PLANT SCIENCE (undergraduate, graduate) 238

Animal science
Plant science (vegetable prod., horticulture, etc.)
Soil sciences
Agricultural entomology
Agricultural genetics
Agricultural microbiology
Parasitology and agricultural virology
Apiculture
Dairy sciences
Food sciences
Other specialties in agriculture (except rural economy, rural engineering, landscape architecture, ornamental horticulture)
Biochemistry
Biophysics
Botany
Wildlife and fisheries
Animal anatomy
Animal ecology
Animal genetics
Animal histology
Ichthyology
Invertebrate zoology
Mammalogy
Marine biology
Ornithology
Protozoology
Vertebrate zoology
Other specialties in zoology (except paleontology)

ENVIRONMENTAL AND CONSERVATION TECHNOLOGIES (community college) 242

Wildlife and fisheries management
Environmental control and protection technologies
Land use technology
Water resources technology
Air purification technology

APPENDIX VIII

COMPOSITION OF FIELDS OF STUDY
PHYSICAL SCIENCES

CHEMICAL TECHNOLOGIES (community college) 248

Industrial chemistry technology
Analytic chemistry
Chemical engineering technology
Biochemical technology
Plastics and fibreglass
Chemical dye

GEOLOGY (undergraduate) 250

Crystallography
Geophysics
Paleontology
Other specialties in geology

MATHEMATICS (undergraduate) 260

Actuarial science
Statistics
Other specialties in mathematics

CHEMISTRY (undergraduate, graduate) 250

Chemistry (except geochemistry and biochemistry)

COMPUTER SCIENCE (community college) 254

Computer systems technology

COMPUTER SCIENCE (undergraduate, graduate) 256

Computer science

PHYSICS (undergraduate) 262

Astronomy
Aerospace sciences
Atomic physics
Physical chemistry
Electricity and magnetism
Mathematical physics
Mechanics
Molecular physics
Nuclear physics
Optics
Acoustics
Fluid mechanics
Quantum mechanics
Solid-state physics
Physical theory
Thermal physics
Thermodynamics and statistical mechanics
Wave theory
Other, physics (except geophysics and biophysics)

PHYSICAL SCIENCES (graduate) 264

Metallurgy, materials sciences (except metallurgical engineering)
Meteorology
Ocean biology
Ocean chemistry
Ocean geology
Physical oceanography
Other, oceanography
Astronomy
Aerospace sciences
Atomic physics
Physical chemistry
Electricity and magnetism
Mathematical physics
Mechanics
Molecular physics
Nuclear physics
Optics
Acoustics
Fluid mechanics
Physics and quantum mechanics
Solid-state physics
Physical theory
Thermal physics
Thermodynamics and statistical mechanics
Wave theory
Other, physics (except geophysics and biophysics)

APPENDIX IX

COMPOSITION OF FIELDS OF STUDY
SOCIAL SCIENCES

LAW (undergraduate) 268

Law and jurisprudence

HUMAN ENVIRONMENT (graduate) 274

Regional planning
Urban planning
Rural planning
Community development
Environmental studies

PSYCHOLOGY (undergraduate, graduate) 278

Abnormal psychology and pathology
Behavioural psychology
Child psychology
Comparative psychology
Social psychology
Clinical psychology
Cognitive development
Learning theory
Career counselling
Psychophysiology
Other, psychology (except educational psychology)

POLITICAL SCIENCE (undergraduate) 286

Comparative politics
Government
International relations
History of politics
Political thought
Urban politics
Other, politics (except public administration)

ECONOMICS (undergraduate, graduate) 270

Economics

GEOGRAPHY (undergraduate) 276

Geography (except earth sciences)

CIVIL PROTECTION (secondary) 282

Fire prevention officer
Firefighter

CORRECTIONAL AND PROTECTION SERVICES (community college) 284

Police technology
Correctional technology
Legal technology
Prevention technology

SOCIAL SERVICES (community college) 288

Child care
Psychosocial research technology
Social assistance
Social work technology

SOCIAL SERVICES (undergraduate) 290

Social services
Social welfare

SOCIOLOGY
(undergraduate, graduate) 292

Criminology
Folklore
Sociology of the family
Sociology of work
Occupational sociology
Sociology of religion
Social theory
Social structure
Other, sociology

SPORT AND RECREATION TECHNOLOGIES
(undergraduate) 296

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ALPHABETICAL INDEX OF FIELDS OF STUDY

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